



**Exploring Shared Services Centres Dynamics:
The Yazaki Porto Technical Centre Engineering
Operations Case Study**

by

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Biographical note of the author

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The author holds a degree in Languages and Business Relations from the University of Aveiro. During the academic period was granted with the opportunity to cooperate as a member of the Pedagogical Forum, to be the course representative at the Pedagogical Commission of the University and to collaborate as a member of the *Campus Europae* Founding Committee.

Since the end of the degree in 2010, Filipa started to work in the Yazaki Porto Technical Centre, starting off as an intern and after two months hired as a full-time temporary member of staff.

In the pursuit of new goals, Filipa enrolled in a master degree in Services Management at the Faculty of Economy – University of Oporto in 2012. Choosing this master degree was related to the functions performed at the company, which deal directly with customers, providing services key to the overall performance and development strategies of the Technical Services Centre.

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Resumo

O objetivo da presente dissertação é explorar os Centros de Serviços Partilhados (CSP) como modelo de negócio aplicável a serviços de engenharia, e como as relações de negócio influenciam as interações dentro da rede dos CSP. Esta dissertação apresenta um estudo de caso realizado na Yazaki – Porto Technical Centre, um CSP que fornece serviços de engenharia aos clientes internos da Yazaki.

Esta pesquisa baseia-se numa cuidada revisão de literatura, particularmente na literatura do *Industrial Marketing Purchasing Group (IMP Group)* que apresenta importantes indicadores acerca da dinâmica das interações de negócio, permitindo uma melhor compreensão do modelo ARA. Considerando a natureza das questões de pesquisa, este estudo de caso é apoiado por uma metodologia qualitativa, e através de uma análise exploratória, tendo sido realizadas quatro entrevistas não estruturadas, cujo os dados ilustram essência dos CSP e das suas interações. Os dados estudados revelam três aspetos principais: o modo como as operações de engenharia podem ser desenvolvidas em modelos CSP; a forma como as interações dentro da rede capacitam o modelo de CSP considerando o modelo ARA; e o modo como o valor é criado dentro de uma estrutura de CSP proporcionando o crescimento autossustentável.

Esta pesquisa contribui para uma melhor compreensão das relações de negócio associadas à interação entre atores dentro da rede do CSP, permitindo o desenvolvimento de estratégias *win-win*. Relativamente às contribuições práticas, a agregação de negócios e o constante ajustamento ao mercado interno presentes no CSP estudado, são consolidados através das suas dinâmicas relações de negócio. Estes aspetos influenciam o posicionamento do Centro na rede e reforçam a sua competitividade, promovendo o crescimento de negócio de forma autossustentável.

Palavras chave: Centros de Serviços Partilhados; Relações de Negócio; Modelo ARA; *Network*.

Abstract

The aim of this dissertation is to explore the Shared Service Centre (SSC) business model as a development opportunity in engineering services and how business relationships affect interactions in the SSC network. This dissertation presents a case study at Yazaki Porto Technical Centre, an engineering SSC that provides technical support to Yazaki internal customers.

This research is based on a careful literature review, particularly on the literature of the Industrial Marketing Purchasing Group (IMP Group) that provides important conclusions about business interactions dynamics to better understand the ARA model. Due to the nature of the research questions, this case study is supported by a qualitative methodology and through an exploratory analysis, where four non-structured interviews were carried out, detailed information was accessed to illustrate the essence of the SSC and its relationships. This research revealed three main aspects: how engineering operations can be developed in SSC models; how the business interactions within the network empower the SSC model considering the ARA model; and how value is created within a SSC framework providing self-sustainable growth.

This case study contributes for the understanding of business relationships associated to the continuous interaction within the SSC network, enhancing the development of win-win strategies. Empirical contributions supports that in the studied Shared Service Centre the business aggregation and the constant adjustment to the internal market, are empowered through its dynamic business relationships. This fact impacts the network positioning and reinforces competitiveness, resulting on the generation of value, contributing for the sustainable self-growth of the Centre.

Keywords: Shared Services Centres; Business Relationships; ARA model; Network.

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List of Abbreviations

ACEA - European Automobile
Manufacturers Association
AICEP – Agência para o Investimento e
Comércio Externo de Portugal
AFIA - Associação de Fabricantes para
a Indústria Automóvel
API – Application Programming
Interface
ARA - Actors Resources Activities
BM – Business Model
BU – Business Unit
B2B – Business to Business
CF – Central Function
CRS – Claims Reporting System
CSC - Customer Service Centre
CSP – Centros de Serviços Partilhados
EDS-E - Electrical Distribution Systems
Engineering
IMP – Industrial Marketing and
Purchasing (Group)
ISO – International Standards
Organisation
IT – Information Technologies
KPI – Key Performance Indicators
MHT – Man Hour Tracking

OICA – Organisation Internationale des
Constructeurs D’Automobiles
OSA - Operational Support Activities
PET – Philippines EDS Techno-
Service, Inc.
PDP – Performance & Development
Process
PTC - Porto Technical Centre
QCD - Quality, Costs and Delivery
R&D - Research and Development
SLA - Service Level Agreement
SSC - Shared Services Centre
SWOT - Strengths Weakness
Opportunities Threats
TDA - Technical Development
Activities
YC – Yazaki Corporation
YCTT – Yazaki Component
Technology Timisoara
YEL - Yazaki Europe Limited
YELZ - Yazaki Europe Limited Zagreb
YNA – Yazaki North America
YSE - Yazaki Saltano de Ovar
YSP - Yazaki Saltano de Portugal
YSS – Yazaki Service de S. De R. L.
De C.V.

1. Introduction

Given the importance of the automotive industry and the growing significance of the tertiary sector, in such a highly competitive business environment, intangible assets are key drivers for the development of services in production and manufacturing areas. Services are now beyond the concept of added value to the product, and exist by themselves as an independent business. They generate a major part of world wealth and is becoming the most dynamic segment of world trade (World Trade Organization, 2015).

To combine the productive and the service sectors in a private environment, organisations need to be dynamic and to have a considerable capability of adjustment to the markets. Shared Services Centres (SSCs) play a strong role in this matter. The concept emerges in the late 1980s in the private sector, with an emphasis on cost reductions (Walsh *et al.*, 2006), mostly used for areas such as Human Resources, Information Technology and Accounting.

According to Schulman *et al.* (1999, p.9), Shared Services Centres are “the concentration of organizational resources performing like activities, typically spread across the organization, in order to serve multiple internal partners at lower cost and with higher service levels, with the common goal of delighting external customers and enhancing corporate value”.

The naming of Shared Services arises from being a collection of services that once were spread across many locations are now concentrated in a single location and can be shared and used by several customers (Van der Linde *et al.*, 2006). In other words, SSCs work within a business network that allows fast activities aggregation with the main purpose of providing great quality services at minimum costs to its internal customers. It is focused on process improvement, drive to realise the business case and expand the low cost benefit by driving process efficiencies.

The authors Van der Linde *et al.* (2006, p.185) defend that a Shared Service Centre (SSC) is neither a decentralization nor centralization from a parent business unit, it is a mix of both, benefiting from both decentralization and centralization, and consequently is a “commonisation” of support processes throughout an organization. Hence, SSCs are separated business units that provide non-core activities as value-adding services for the parent-company (Ramphal, 2011).

The nature of SSCs reinforces the idea that business networks developed in this model, contribute directly to business relationships that have great importance in the business world amongst several actors. This dimension is also analysed in the present dissertation according to the Actors, Resources and Activities (ARA) model developed by researchers of the IMP Group (Axelsson & Easton 1992, Hakansson & Snehota 1995; Ford *et al.* 2010, Stenroos & Jaakkola 2010, Gottfridsson 2011). This model is pivotal in the study of relationships that evolve through interactions and exchanges between actors, resource and activities.

This dissertation discusses a Shared Service Centre case study in a Japanese Automotive Company, in its Portuguese branch: Yazaki Saltano de Ovar – Porto Technical Centre (PTC). This particular company was chosen due to the complexity and the essence of the services developed in this SSC: engineering operations. The suitability of these type of services that integrates this SSC within the company network, governed as an operating unit that competes for investment and demonstrates its value as every other operating unit has to do, is also explored. The challenge of gaining competitive market advantage in the automotive industry supply chain has to be met through a structured development strategy, taking into account many contributing factors explored downstream in this dissertation, which will lead to the maximization of the purpose of any business deployment, the Return on Investment.

Referring Tomasino *et al.* (2014), SSCs do not contribute directly to the core business of the organization, they support mission-critical business processes, however for the SSC itself, it represents the core business. In PTC, its core business is engineering services, thus the questions proposed are:

1. How engineering operations can be developed in Shared Services Centre models?
2. Considering the ARA Model, how the business interactions within the network empower the SSC model?
3. How value is created within a SSC frame that provides self-sustainable growth?

This can be achieved through the establishment and consolidation of structured and integrated business processes and flows, through the inception of localized businesses in competitive shared services organizations, developed by refining or redeveloping business models.

Without the customers' perception of the value of the proposal, there is no business pursuit – win-win concept (Stenroos & Jaakkola, 2010). This concept of integrative negotiation has the purpose of developing and optimizing not only the company, but also their customers and suppliers. Hence, all parties can benefit from each other, by focusing on the best interests of each party, by creating innovative solutions and by providing value to the business relationship through changing from a cost reduction model for a cooperation model.

Relevant to notice, that from this dissertation, together with both supervisors, was developed a paper presented at the Industrial Marketing and Purchasing Group 2017 Conference in Kuala Lumpur, Malaysia. The selection of this paper evidences the growing importance of Shared Services Centres and business relationships, not only in the business world, but also as a contribution to the existent literature.

The present dissertation is divided in six main chapters in line with the planned structure model, aiming to explore engineering operations as development opportunities for Shared Services Centres that creates leads to business prosperity. This purpose can only be achieved by analyzing SSCs business networks and connections.

To accomplish the main goal, a literature review was made showing the SSCs concept explanation and dimension, followed by the analysis of business relationships according

to the Actors, Resources and Activities model developed by Hakansson & Johanson (1992). The ARA model review will help to understand how business networks are important to demonstrate the existing connections in the PTC SSC. This information is critical to analyse business dynamics and to show how the interactions of the PTC SSC within a wider network enhances the creation of value.

Theoretically, the research contributes to the expansion of the studies in the area of the aim of this dissertation. The IMP Group literature was crucial, since it has remarkable outlooks of how companies are connected into a greater network through their relationships. By considering the interplay between actors and how all activities are linked to each other as well as how the existing resources are used, value is created for the organizations within the network. Main contributions for the IMP Group relate business relationships to the continuous interaction within the Shared Services Centres, enabling win-win strategies (Stenroos & Jaakkola, 2010). Another contribution is the reinforcement of works developed by the IMP researchers, defending that the SSC networks are connected and it contributes to the positioning of the SSC and how actors are influenced by these relationships.

Empirical findings shows that is possible to explore SSC models in engineering services, as it adds critical business benefit to maximize value generation. This research also highlights the importance of competing internally, as the object of this case study is a multi internal service provider. Business relationships are seen as a tool that empowers the PTC SSC through their network interactions to successful business aggregation (Hakansson & Snehota, 1995). It is also analysed that this aggregation between the SSC frame and the business relationships, impacts the network position (Morris *et al.*, 2015) and enhances competitiveness. The range of services that the PTC SSC offers is in constant adjustment to the internal market (Rothwell *et al.* 2011), in order to meet each customer requirement. It is concluded that the output of the PTC SSC is not only an accurate execution of services, but also to be flexible enough to provide tailored services, resulting on the maximisation of the value generated for the business and relationships.

After the literature review and the methodology analysis, the empirical work is presented and discussed in the case study findings, as well as the conclusions, which will answer the research questions in order to explore the essence of the SSCs in engineering services and how business relationships affect interactions in the network.

2. Literature Review

The following chapter presents an extensive literature review about the unique characteristics of the main subject of this dissertation, Shared Services Centres (SSCs). The explanation of the SSC dynamics will provide a better understanding in what concerns the functionality of this business model. An approach to the importance of management in these centres is also presented, as well as the dynamic and significance of business relationships according to the ARA model.

2.1. Shared Services Centres

Considering the market growth and the services key role in the industry, companies have to arrange new business forms to survive. Being dynamic and capable of fitting to any reality are vital characteristics for organisations that want to develop prosperously in the changing external markets. Thus, companies begin to consider new business solutions as a way to enhance competitiveness. These business answers were defined as integrated solutions that represent value creation not only for the company, but also for the customer, requiring extensive coordination in the organisational responses (Ferreira *et al.*, 2013).

2.1.1. Business Models Approach

Business models (BM) are build up as one of these new business solutions, emerging in companies as responses to the surrounding marketplace, enabling organizations to adopt the best suitable strategies according to each business type. As Magretta (2002, p.4) refers "...all new business models are variations on the generic value chain underlying all business.", this means that working as a tool for the companies, business models connect all parties and business strategies, contributing to a successful working environment (Magretta, 2002). This is, indeed, the strongest positive aspect in business models, recognised by companies to enhance value creation and superior business performance arising from different origins.

Business models are referred as “...a concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and economics are addressed to create sustainable competitive advantage in defined markets.” (Morris *et al.*, 2005, p.2). Therefore, the model adopted by companies to drive business can be the formula to the success or to failure, due to the fact that BM are the structural basic pillars of any organization to ensure self-sustainable growth with dynamic competitive strategies (Baden-Fuller & Morgan, 2010).

As Morris *et al.* (2005) refer, BM have positive results when they are incorporated with strong management, superior execution and coordination of activities within the companies’ value chain. The same authors defend that by combining this unique form to create value and innovation, companies started to see this business response as an adaptable process to strengthen the network position. Having this information in consideration, companies are encouraged to look for dynamic solutions to ensure value creation not only for the company, but also for the customers (Teece, 2010; Copani & Urgo, 2012; Achtenhagen *et al.*, 2013).

2.1.2. Shared Service Centre - Concept Explanation

One of the business solutions developed in response to the above mentioned evolutionary need were Shared Services Centres (SSCs). The Shared Services concept as a business model emerges in the 1980’s (Walsh *et al.*, 2006; Marciniak, 2013; Paagman *et al.*, 2015), with the main purpose for organisations to reduce administrative costs and focus on the core business.

Primarily services in SSCs were Finance, Information Technologies, Human Resources and Purchasing. For companies, these activities were considered as peripheral services, which means, that they were not the core business and they did not contribute directly to the value creation. This empowering model is not considered as a static business model, but rather as a dynamic business solution that is always adjusting its approaches to the business environment and to ensure self-sustainable growth (Sumi, 2007).

To go further in the explanation of the concept, it is important to refer that according to the reviewed authors Van der Linde *et al.* (2006), Walsh *et al.* (2006), Bondarouk (2014) and Raudla & Tammel (2015), and as mentioned in the introduction chapter, SSCs are neither “centralization” nor “decentralization”, but benefits from both. This means that this “commonized support” enables business units to focus on the core business, yet maintaining the control of the decisions and enhancing the SSCs to be more receptive to the client needs, allowing to develop critical mass of skills, as it creates economies of scale and synergies in the group by sharing the best practices and obtaining the group recognition (Van der Linde *et al.*, 2006) and, of course, empowering companies. To clarify this idea, Van der Linde *et al.* (2006, p.176) defend that a SSCs is “...outward-oriented towards the business units it serves, is an equal partner in the organisation, and is responsible for its own costs and service levels”.

Presented in table 2.1. is a description of what Shared Services Centres are, according to the authors studied in this section and is followed by an analysis of the general concept.

Table 2.1. Shared Services Centres Concepts

Authors	Concepts
Ramphal (2011)	Collection and concentration of duplicated non-core and non-value-adding activities from the various business units of an organization into a separate business unit whose task is to provide and manage these services as value-adding activities.
Van der Linde <i>et al.</i> (2006)	Concentration of organizational resources performing like activities typically spread across the organisation, in order to serve multiple internal partners at lower cost and with higher service levels, with the common goal of delighting external customers and enhancing corporate value.
Paagman <i>et al.</i> (2015)	Shared services is an organizational concept that consolidates processes within the group in order to reduce redundancies; delivers support processes; is a separate organizational unit within the group; is aligned with external competitors; has cost-cutting as a major driver for implementation; is focused on internal customers and is operated like a business.
Raudla & Tammel (2015)	SSC has been conceived of as a “sourcing arrangement”, which takes the form of “in-sourcing” rather than “out-sourcing”. SSC enables the participating organizations to focus on their core tasks. The argument is that since the management does not have to deal with the day-to-day operations of back-office functions anymore, they would have more time to concentrate on the main (substantive) activities.
Schulz <i>et al.</i> (2009)	Result of consolidation of processes within the company: In de-centralized corporations, each unit has its own support service tailored exactly to individual requirements. These previously distributed support services are consolidated while forming SSCs.
Tomasino <i>et al.</i> (2014)	In most shared services arrangements, one or more organizations consolidate activities into a shared services centre (SSC) that supports non-mission-critical business processes from each participating organization in a separate operating unit that runs those activities as its core business.
Bergeron (2002)	SSC is a collaborative strategy in which a subset of existing business functions are concentrated into a new semi-autonomous business unit that has a management structure designed to promote efficiency, value generation, cost savings, and improved service for the internal customers of the parent corporation like a business competing in the open market.
Bondarouk (2014)	SSC can be defined as an accountable entity in the internal organization of a firm or institution tasked to deliver specialized services to operational units (business units, divisions) on bases of a service-level agreement SLA against set transfer prices.
Rothwell <i>et al.</i> (2011)	An emerging alternative to outsourcing is the shared service center (SSC) in which activities previously located in business units or head office are retained within the organization but aggregated into a new central unit, operating at arms' length from the mother organization in a quasi-market manner.
Baraldi <i>et al.</i> (2014)	Shared Services Centre emerges as new business model, with a purpose to generate business value for the clients, throughout the identification of the market segmentation and the specification of the revenue generation, defining the value chain structure and the company structures as well and what is its position in the network and connect the organization to its suppliers and clients.
Herbert & Seal (2012)	The SSC is a new organisational form that combines a market-style, customer-centred, outlook with in-house management direction and control.

Source: Adapted from the several authors mentioned in the above table

According to the analysis of the authors above, there are several concepts that are common to each other. For example, all the authors agree that SSCs are an aggregation of services in a single business unit that provides support activities to the multiple internal customers. Higher levels of performance, great quality in services and cost savings are the main achieved benefits that will be further displayed.

In consonance with what Ramphal (2011) defends, a SSC can be considered as an additional separate business unit, which provides services at a fee to the other business units. The same idea is also sustained in the work of Van der Linde *et al.* (2006) that states that a SSC must be managed as an independent business. They also find important aspects about SSCs that should be considered in the concept definition, because as they clarify, SSCs cannot be considered as an “internal push to have all support (non-core) activities...” (Van der Linde *et al.*, 2006, p.179). Companies need to analyse the best options for the entire group and have in consideration which services SSCs can provide and at what cost, not only economical costs, but also performance costs.

To go deeper into the concept of a SSC, Raudla & Tammel (2015) define two types:

- Vertical SSC: incorporates organisations that are in a hierarchical relationship. This means that the unit that provides support services is located in the parent organisation;
- Horizontal SSC: provides support services to organisations that are not in a hierarchical relationship and operates as an individual unit outside the internal structure.

These same authors also define three main dichotomies that need to be in consideration when implementing SSCs:

1. A SSC can be intra or inter organisational. If it is a vertical SSC (denoted as V), all the departments of the same parent company would jointly use the intra organisational SSC. In case of horizontal SSC (denoted as H), the sectorial boundaries would be extended and include different departments with all participates as equals;
2. The creation of a SSC is mandated by a legal act (denoted as M) or is it optional (denoted as O) for the organisations involved;
3. Does the SSC follow a big bang approach (denoted as B) or an incremental reform strategy (denoted as I)? In the big bang approach, the objective is to create the SSC in a short-time period and in a comprehensive manner by including all organizations that will use the SSC. In the incremental approach, the creation of a SSC is seen in a long-time period, step-by-step gathering the different paces of each organization that will be evolved in the SSC.

The above dichotomies formed a matrix, see table 2.2., where companies can fit in its own type of reform model when creating a SSC.

Table 2.2. Typology of Reform Models when creating Shared Service Centres

	Incremental	Big Bang
Vertical		
Optional	VOI	VOB
Mandated	VMI	VMB
Horizontal		
Optional	HOI	HOB
Mandated	HMI	HMB

Source: Raudla & Tammel (2015)

The above matrix contributes to the understanding of the concept of SSC by learning which type of SSC can be created, by identifying the reasons to implement this model and the type of approach. This allows companies to know the origins of the SSC, provides a better understanding of the structure and also about the initial operation mode. These unique characteristics bring advantages for market differentiation and referring Thomas (1978, p.162), “the more abstract and complex the service is, the greater the need and potential for developing a reputation that will serve as a barrier to entry”.

2.1.3. Services Approach

To complement the information above on Shared Services Centres, it is important to briefly explain the concept of Services. Services are open processes, where the customer’s continuous presence plays a key role as evaluator of what is provided (Jääskeläinen *et al.*, 2014). When providing a service, the customer becomes a part of that production, hence, the service happens when the interaction between provider and customer takes place. Main characteristics of services are:

- **Intangibility:** considered as performances that cannot be counted, measured, inventoried, tested and verified due to the absence of a physical nature (Parasuraman *et al.*, 1985; Wolak *et al.*, 1998). This also means that the buyer will give value to what makes the service as tangible as possible, such as the place where the service is located, how it is served, all the physical aspects of the services provided;

- Inseparability: means in this context simultaneity, which means that services production and consumption are inseparable, turning the customer into a “co-producer” contributing directly to business relationships (Langford & Cosenza, 1998);
- Heterogeneity: directly related to the variability that services activities present, which can be influenced by the surrounding environment and by the difficulty in behaviour consistency. This provides the opportunity to deliver flexible and customised services according to what customers need (Langford & Cosenza, 1998; Wolak *et al.*, 1998; Schneider, 2004);
- Perishability: as the word indicates, means that services cannot be stored and time is important, because once lost, the loss is permanent. Consequently, the dynamics and synchronization between demand and offer of services should be well coordinated by the organisation operations management (Langford & Cosenza, 1998; Wolak *et al.*, 1998).

In addition to the explanation above, in Siha’s (1999) study, the revised author Chase (1978), classifies services according to the level of contact with the customer. If high contact, they are classified as “pure services”, on the other hand if low contact, they are considered as “quasi-manufacturing” services. With respect to Shared Service Centres models, it is suggested high levels of contact with their internal customers.

According to Silvestro *et al.* (1992), that is also an author revised in Siha’s study, with the service process matrix based in an empirical study. This matrix shows how the volume of customers processed within each type of service is related to the service classification:

- Professional Services – requires high level of involvement with the service provider/high customisation (*i.e.* Consulting);
- Service Shop – requires medium level of involvement with the service provider/many customer transactions (*i.e.* Hotels);
- Mass Services – requires low level of involvement with the service provider (*i.e.* Transports).

The author Schmenner (1986), referred also in Sihas's study, presents an alternative service process matrix showed in figure 2.1.:

Figure 2.1. The Service Process Matrix

		Degree of Interaction & Customization	
		Low	High
Degree of Labour Intensity	Low	Service Factory: -Airlines -Trucking -Hotels -Resorts & Recreation	Service Shop: -Hospitals -Auto Repair -Other Repair Services
	High	Mass Service: -Retailing -Wholesaling -Schools -Retails Aspects of Commercial Banking	Professional Services: -Doctors -Lawyers -Accountants -Architects

Source: Schmenner 1986

This matrix shows the level of interaction and customisation in the service process with the degree of labour intensity, and it is also very useful for business strategic operations enabling a better performance. For each type of service, Schmenner (1986) presents several examples that are more or less customised and standardised, resulting in unique combination between the degree of labour intensity and the customer interaction and customisation. Explaining the four quadrants:

- Service Factory requires low customisation/interaction of customer and low labour intensity, allowing to limit the variability and compete through the "...area of price, speed and the personal touch." (Siha, 1999, p.259). This means that it benefits from economies of scale and there is no need for expensive workforce;
- Service Shop requires high customisation/interaction and low labour intensity which means that there is a higher level of variability offered as the competitive advantage, however, this also means that it is harder to manage the operations;
- Mass Service requires low customisation/interaction and high labour intensity, at this point organisations compete in "...price and offering of choices" (Siha, 1999, p.261) and limits the service mix, allowing companies to have better control;

- The last quadrant, Professional Services, requires high degree of labour intensity and high degree of customisation/interaction. This quadrant depends on highly professional skills and may compel providers/customers to spend a great amount of time in labour intensity.

Considering SSCs, the Professional Services quadrant is the match for the SSC model, due to the characteristics of this classification that are similar to the characteristics of the SSC. It demands high degree of labour intensity and high degree of customisation/interaction expecting from the SSC highly specialized services delivery (Bondarouk, 2014) and tailor-made solutions. These classifications allow the understanding of the different type of services, where companies may fit them in and to work on their strategies.

2.1.4. Benefits of Shared Services Centres

By sharing services, the opportunity to re-model organisations is enhanced enabling a better usage of the available resources to meet the customers' needs (Ferreira *et al.*, 2016). This collaborative strategy promotes effectiveness, value generation, cost savings and improved service (Van Aken, 2011).

In short, cost savings can be achieved by using economies of scale, a better service is provided to the internal customers because by focusing on core competencies, the SSCs can be more competitive and profitable, as it promotes efficient resources usage. In table 2.3., the main benefits of Shared Services Centres models are presented.

Table 2.3. Advantages of Shared Service Centres

Authors	Sumi, 2007	Ramphal, 2011	Van .der Linde <i>et al.</i> , 2006	Paagman <i>et al.</i> , 2015	Raudla & Tammel, 2015	Schulz <i>et al.</i> , 2009	Marciniak, 2013	Schulman <i>et al.</i> , 1999	Bergeron, 2002	Bondarouk, 2014	Rothwell <i>et al.</i> , 2011
Advantages											
Protect Critical Know-how	X			X							X
Business Experience	X			X							
Cost Savings	X	X	X	X	X	X	X	X		X	X
High Quality	X	X		X	X		X	X	X	X	X
Value Creation		X	X	X				X	X	X	X
Promotes Economies of Scale		X	X		X				X	X	X
Enables High Quality Resources		X		X							X
High Degree of Specialization			X		X						
Customer Focus			X		X	X			X	X	
Continuous Improvement	X		X					X			
Usage of Leading Technology	X		X				X	X	X		
Promotes "One Company" Approach			X				X				
Improve Efficiency, Effectiveness and Productivity	X	X		X	X				X	X	
Process Standardization	X			X			X				
Promotes Innovation				X	X						
Improve Control				X							X
Consistent Management Information				X	X						
Improve Compliance with Legislation and Standards				X							
Risk Minimization	X			X							X
Creates Synergies					X	X				X	
Reduce Redundancies	X					X	X	X			
Aligned with External Competitors						X					

Source: Adapted from the authors referred in the table

All the benefits presented in the above table are important advantages that organisations can obtain with the implementation of Shared Service Centres. Summarizing the above table, the most common advantage recognised by the authors is the cost saving that SSCs promote, by enabling economies of scale. It is unanimous that a SSC model reduces administrative costs in general. By aggregating all the non-core core business activities into a single location and serving multiple locations, reduces service redundancies and allows the maximum usage of resources. Another very noted advantage is the high quality that SSCs provide in services delivery. By being customer-centred and fully dedicated to the services that are provided to its customers and with a very specialised workforce, value is created for the company as a whole and improves efficiency, effectiveness and productivity.

Besides all the benefits mentioned, SSCs cannot be created with the sole purpose of cost savings, but SSCs are the real example of how companies can use their business models to improve the services provided, increase creativity, innovation and enhance “...better relations with partners, suppliers and customers.” (Deloitte, 2014, p.15).

The results of this business solution have been very profitable. Due to this, many parent-companies have decided that instead of looking to outsource their services, companies start to create SSCs and become “...internal corporations with admirable corporate performance.” (Sumi, 2007, p.2779). This new definition of creating a shared value, is not only related to business profit *per se*, but also to all new opportunities that shared value brings by enabling greater innovation and expansion between all counterparts, creating a supportive business environment (Porter & Kramer, 2011). The SSCs are cost-efficient, service effective, with agility and minimizing complexity (Janssen *et al.*, 2009), thus contributing directly to the value chain.

2.1.5. Decision-Making: Adopting Shared Services Centres

The decision-making for a business model solution must be integrated with the organisations’ strategies, *ergo* every organisation needs to analyse carefully the choice for new business solutions such as a Shared Services Centre. A business solution is an integrated range of services and/or products targeting the fulfilment of customers’ needs

(Ferreira *et al.*, 2016). These solutions can occur within the same group – insourcing or outside the same group – outsourcing, and they can also be delivered in the same country – on shoring or in different countries – offshoring (Deloitte, 2014).

Considering the importance of the expression outsourcing (opposed to insourcing), it is important to clarify the term, that is defined as an external contracting of non-core activities by the parent company that have to decide to “make or buy” (Baraldi *et al.*, 2014, p.554). Hence, as mentioned before and as similar to insourcing, the parent-company is dedicated to its own true core activities. Table 2.4. shows the main differences and common aspects between outsourcing and insourcing.

Table 2.4. Differences and Common Attributes in Outsourcing and Insourcing

Parent Company	
Outsourcing	Insourcing
Share the company know-how	Keeping know-how inside
Entails a stable relation with the parent company	Implies proximity to the parent company
Management outside the parent company	Management inside the parent company
Higher contractual costs	Minimized contractual costs
Less control from the parent company	Greater visibility and accountability
Risk of Opportunism	
Perform value-creating activities, non-core for parent company	
Promotes economies of scale	
Reduce costs	
Customer-centred	

Source: Adapted from Herbert & Seal (2012); Baraldi *et al.* (2014)

As depicted by the table above, companies adopting insource business solutions like SSC as a business model, have the opportunity and the benefit to provide high quality services adjusted to the clients. This allows the protection of the critical know-how, the business experience and the management control inside the company.

As stated in the work of Langford & Cosenza (2015, p.20), “the service component of any offer (product) can be a major or a minor part of a firms' offer.”. According to Leitão *et al.* (2013), this also means that the chosen business model by the company has to be adjustable to the growth of the value chain as fitted to all parts involved.

According to a study on Shared Services Centres made by Deloitte (2014) and as mentioned before, it is reinforced that this business solution enables parent-company to focus on its core business while the SSC can focus on its core competencies in order to

generate a higher return of investment. Deloitte's (2014, p.17) study also identifies six main risks that, when implementing a SSC, companies must have in consideration:

1. Administrative risk: companies may suffer from "...inadequate implementation strategy; fragile organisational structure; incomplete planning; resistance to change; ...", these risks can derive from the inside of the business structure;
2. Economical risk: the economical context when implementing a SSC may influence the companies' decision, due to "...weak economy and increased competition...";
3. Political risk: again, the context where companies are implanted, are very important to the success of this business model, the "...political instability and instability of domestic legislation" may represent obstacles;
4. Legal risk: the "...violation of customer privacy, intellectual property loss, poorly designed agreements...", can jeopardize the business performance;
5. Technological risk: "...outage of crucial processes of parent company...". Technology is seen as one of the most precious resources of companies, therefore these type of risks should be avoid;
6. Marketing risk: "...lack of an internal market...".

These aspects show the importance of the need for a careful investigation and great coordination in the organisational responses (Ferreira *et al.* 2013). The risks presented should be studied and the business environment as well, because in order for a SSC to thrive, it is essential to have riskless and stable relations between all business units and the SSC (Ramphal, 2011).

Another perspective about SSC implementation is taken by the authors Walsh *et al.* (2006), whom identified six key factors that parent-companies have to take into consideration:

1. The need for an effective SSC top management support and leadership;
2. Define which services to move into the SSC;
3. People management issues that may arise due to the loss of the transactional services;
4. Ensure an effective governance arrangement in place;
5. Balancing business process redesign and reshaping of roles and technology;

6. Building a new culture integrated with the existing corporate culture.

These authors go even further defining that for SSC managers, these factors also means that on-going operations the following items must be carefully monitored:

- Monitoring and managing costs;
- Monitoring accountability issues;
- Precedence in the use of service level agreements;
- Monitoring performance accountability.

Not only the items above are important to the SSC, but also for the SSC value, that is frequently determined by the customer, relative to the competitors and also by the market, which needs to be monitored as well. As Thomas (1978) refers, services pricing is often based on the service value rather than the cost.

To achieve worthy results Schulman *et al.* (1999) identify the main elements that must be present in a SSC:

- Service Level Agreements;
- Service Centre (call centre/help desk);
- Skilled and Experienced Employees;
- Good Communication Channels;
- Range of services that add value to the business units.

Regarding the Service Level Agreements (SLA), Van der Linde *et al.* (2006), Walsh *et al.* (2006), Herbert & Seal (2012) and Marciniak (2013), defend that SLA is one of the best methods to define which elements must be present in the contract between SSCs and their customers, therefore it is a positive approach to promote interaction between parties (Scotland Government, 2011). SLAs are written agreements that deliver precise definitions of what customer needs and what organizations can provide to avoid unrealistic expectations and establish reasonable limits. Essentially, SLAs identify which type of services will be provided and “...fee-for-service cost basis.” (Walsh *et al.*, 2006, p.12). Marciniak (2013) also upholds that as more elements are included in SLA and foresee as much situations as possible, the lower are the chances of having conflicts in the future. In spite of this win-win purpose of transparency, it is important not to “...over-regulate services delivery...” (Marciniak, 2013, p.220) and enhance the fit and the capacity of adjustment.

In what concerns the other elements, such as service centre, it enhances the proximity to the customer and as supported the customer feels, as increased will be the customer satisfaction and retention. Having skilled and experienced employees enable any company, being a SSC or not, to developed the business and helps to be ready for any outcome that may arise. Strong communication channels are pivotal in the life of an organization, where internal and external communication is necessary. Throughout the entire SSC structure, channels must be accurate, effective and understandable at all levels, in order to correctly transmit the goals of the organisation and enhancing the business growth.

As mentioned previously in the present dissertation, the chosen service activities to include in the SSC in pursuance of success have to be a range of services that adds value to the company.

2.1.6. Importance of Quality

Quality in the overall activities is the breaking point: quality is assumed. In all types of sectors, services or not, quality is the one aspect that no organization can forfeit, because for all customers quality is expected. The assurance of this aspect is extremely important however, due to the intrinsic characteristics of services and the SSCs as well, quality is more difficult to evaluate in services than in goods.

According to Parasuraman *et al.* (1985), service quality perceptions come from the comparison between customer expectations and the real service experience. Meaning when the service quality is evaluated, not only the outcome is evaluated but also the entire process of the service delivery. Therefore, service quality can only be perceived after the service is experienced.

In centres that are specialized in providing high quality services, and in spite of having a skilled workforce, it is important to mention that quality can be influenced. This is due to the fact that it varies from producer to producer and from customer to customer. However, this is not an excuse to have less attention in services. Quality must be

assured in shared operations because if not, defects and claims emerge and consequently the business suffers penalties that can lead to rework extra costs, customer losses and damage the network position.

As Parasuraman *et al.* (1985, p.41) analysed, the Japanese culture refers that quality is doing right at the first time: “zero defects”. These authors also defend that there are crucial aspects to take into account when talking about quality in services, presented in table 2.5.:

Table 2.5. Aspects in Service Quality

Reliability	Consistent performance and dependability	QUALITY
Responsiveness	Eagerness of employees to provide the service	
Competence	Skills and knowledge adjusted to the job performance	
Access	Approachability and ease of contact	
Courtesy	Kindness, respect, consideration and friendliness of contact personnel	
Credibility	Trustworthiness, believability and honesty	
Security	Freedom from danger, risk, or doubt	
Understanding/ Knowing the customer	Making an effort to understand the customer's need	
Tangible Elements	Physical evidences of the service	

Source: Adapted from Parasuraman *et al.* (1985)

These items contribute to a higher performance when producing a service and might be a key factor that contributes to customer loyalty. Also, the employee loyalty towards the organisation is important, in order to reduce staff turnover and contribute to the growth of the company through the relation established with the customer.

The SSCs, as well as many companies, have quality tools to ensure that the aspects above presented are ensured. The existent tools, such as Total Quality Management that involves all the partners in order to serve the client with perfection (first implemented at Toyota in Japan); Six Sigma that consistently tries to achieve process improvements by removing the causes of defect and minimizing variability (first introduced at Motorola);

other tools that require implementing audits; certifications (International Organisation for Standardization) and many more, all contributing to ensure the attainment of the aspects presented by Parasuraman *et al.* (1985). These tools are widely used and each one has a purpose, but all of them have the final goal of high quality services (or goods) delivery through the continuous improvement. As expected and referred previously, being a SSC implies greater level of interdependence throughout the organisation as a whole (Janssen *et al.*, 2009), thus the SSC managers need to be perfectly synchronized to continuously achieve success. In spite of the business growth, it is crucial that a SSC does not decrease service quality.

2.1.7. Management and Cultural Approach in Shared Services Centres

Management Approach

Shared Services Centres are businesses that operate as a nearly independent business unit, so it must be managed as a business (Ramphal, 2011). This is the first idea to make clear for managers in these business units. Among all the benefits that this business model enables that were previously stated, it promotes inside management control and flexibility, allowing the resources level to be adjustable to each step the company defines (Rothwell *et al.*, 2011). This means that management can control the evolution of a SSC according to the reality of the company.

The management of the parent-organization and the management of the SSC must be well structured and coordinated, with defined and adjusted goals in furtherance to achieve success. As mentioned before, excellent communication is vital to this achievement, therefore business relationships have a key role in this subject and will be analysed ahead.

Top management involvement is pivotal, since this is a change to a new business model, tensions and resistance may appear. Sometimes the SSC managers also feel under pressure to justify themselves as business partners, not only to the parent company but also to communicate their value to the internal employees (Herbert & Seal, 2012). To minimize this tension, it is important to assure:

- A competitive environment;

- The steps to take according to the goals established;
- Transparency and involvement of the concerned parties;
- The corporate culture.

Healthy competitive environments enhance the workforce to work better and more, allowing the SSC to be closer to the benefits that this business model promotes. As explained before, the SSC model is insourcing, thus the company can decide when and which steps to take. For the success of the business, managers' involvement is crucial and to involve the different business actors that are related is also pivotal. Corporate culture promotes union between all the business units and reduces the feeling that may arise in this singular business unit that is a SSC. The concept of corporate culture will be explained further on.

As mentioned before, whilst the parent company is focusing in its core activity, the SSC is also focused in its own core activity and operates almost like a private company within the parent company. The most significant challenges for the SSC management is the capability to maintain a high customer service level with a great level of quality, as well as high process efficiency and the capacity of recruiting and retaining management staff. For the SSC management is important to balance supply and demand in order to attract internal customers and also to “optimize internal and external delivery resources and demonstrate the value delivered in a tangible way” (Marciniak, 2013, p.218). Meaning that customers expect integrated business solutions that include all their requirements, custom-made, with great support on an ongoing basis (Ferreira *et al.*, 2013). If SSC management have the capability to coordinate all these elements, an “unique and indivisible” service solution will arise (Ferreira *et al.*, 2013, p.1094-1095).

As Magretta (2002) advises, in managerial terms, any business model should work almost as a scientific method, starting with a hypothesis, which is tested and revised whenever is necessary to make the SSC business model works successfully. Every test made, will provide crucial feedback to achieve the proposed SSC goals.

Tomasino *et al.* (2014) present five guidelines that may help management to operate SSC business models successfully, as shown in table 2.6.:

Table 2.6. Guidelines for Successfully Managing System Complexity in a Shared Service Centre Collaboration

Guideline	Description
Use a Gap Analysis to Gain Consensus	Ensures that the initial conditions for a complex project are defined. It identifies the needs of the organisation, identifies the current organisational shortcomings and aligns the views of the important stakeholders.
Create a Highly Interactive Governance Structure with High-Level Participants	Ensures that the organisation consciously “complexifies” the project. Creates a structure that enhances interaction among team members. Empowerment of team members.
Preserve the Flexibility to Control for the Butterfly Effect	Ensures risks are identified and contingency plans are made. Events can change anytime. Managers must preserve project flexibility and assure that the team realizes that problems and changes will occur.
Prevent Workarounds from Becoming Standard Practice	Prevents workarounds threatening the integrity of a shared system and the future of the SSC.
Anticipate Future Threats to Sustainability: Secure Long-term Funding	Emphasizes that complex SSC projects require continuous post-implementation funding. Long-term funding creates confidence in all the team members and vendors. A SSC project must include detailed yet flexible funding plans for operations, maintenance and upgrades.

Source: Adapted from Tomasino *et al.* (2014)

These guidelines have the purpose of identifying the existing gaps in managing a SSC and through the organizational implications, know the difference between success and failure. The key is to recognize that there is huge complexity in SSC models and embrace these challenges.

Marciniak (2013) suggests that managers should focus on cost savings and efficiencies, but also go beyond this and impart effectively SSC value and improve business results. Non-formal relations are also important to the SSC life. The author defends that the SSC credibility in providing assistance and dependability in maintaining high levels of service satisfaction are essential to the SSC managers to be seen “...as internal consultants than support staff helping line managers solve difficult business problems and producing data-based observations...” (Marciniak, 2013, p.219). By creating integrated solutions, solving business problems and producing data-based systems will enhance the dynamic capacity that a SSC adds to the parent company.

As supported by Bergeron (2002), it is important to refer that like any other business, the SSCs have a budget, an administrative staff and other business-related management areas. This business unit has a degree of autonomy from the parent company and the

bigger that autonomy is, the greater is the pressure to provide quality services at competitive prices. Furthermore, to enhance this value it is very important for the SSC management to use marketing methods to increase perceived service value.

Silvestro *et al.* (1992) developed six service typologies that help to differentiate better management issues and services types. These dimensions are widely used in service management operations and, once again, they can support SSC management to run the business accurately:

1. Equipment/people focus: equipment focus is the provision of certain equipment as a core element in service delivery, whilst people focus is the provision of contact staff as the core element in service delivery;
2. Length of customer contact time: high customer contact implies spending of a long period of time per transaction, whilst low customer contact results in a short period of time per transaction;
3. Extent of customisation: service is adjusted to fulfil the needs of each customer. Low-degree results on non-varying standardised process while high-degree means exactly the opposite;
4. Extent to which customer contact personnel exercise judgement in meeting individual needs: high-degree of discretion is where front-office staff can exercise judgement to change the service provision without referring to superiors, while low-degree is where changes can be only made with prior superior authorization;
5. Source of value added, front office or back office: a back office oriented service is where the proportion of front-office staff to total staff is small, a front office oriented service is the opposite;
6. Product/process focus: product oriented have the emphasis in what customers buys, whilst process oriented have the emphasis in how the service is delivered to the customer.

These typologies are similar to the Schmenner (1986) service process matrix and that was also referred by Siha (1999) analysed in the previous sections. The great purpose of these typologies is to identify the dimension of the SSC and in consequence, management may focus in what is important to accomplish and how to achieve

prosperity in win-win negotiations. These negotiations need, as well, an effective leadership and workforce, which is another key aspect that leads managers to achieve SSC success. Managers should consider the existing marketing opportunities plus the operational excellence, using superior technology and adjoining the importance of metrics to business measurement (Ramphal, 2011).

Being a service company, the SSC managers can invest in formal and non-formal operations in order to be more attractive and reliable to the customers. Maintaining favourable customer relationships may influence profitability, because they are dependable and they enable positive word-of mouth communication and this is where informal business relationships play a strong role. By strengthening these relations, bonds are being forged and this is vital because customers will prefer a SSC over other companies and this might lead to increased business volume (Zeithaml *et al.*, 1996). Further ahead in this dissertation, business relationships will be explained.

As any other company, the SSCs needs good general management practices to provide supportive and constructive supervision to all associates, appropriate training according to the companies' requirements, and, of course, give the necessary equipment and conditions to work in a pleasant environment that enhances a strong foundation (Schneider, 2004). These aspects might be seen as expected and basic by the management perspective, however they are critical for the human resource perspective and the SSC management should assure these positive practices, especially considering that for all companies the acquisition of human resources is their greatest asset and the "...major purchased item" (Thomas, 1978, p.164). As its own designation refers, Shared Service Centre are people-based services business, therefore, assuring good management practices is decisive to business prosperity.

Bondarouk (2014) defines that accomplishment comes also from a strong management capacity, using adequate and effective technology systems as well as integrated solutions that can reflect the tailored service made according to each requirement. Corporate culture has a strong part in this matter, contributing directly to the success of SSCs.

The Importance of Corporate Culture

Strong corporate culture empowers the SSC network position and also enables associates to merge with the SSC identity. To clarify the concept, corporate culture is considered as a set of values and beliefs shared by associates in a company (Chen *et al.*, 1997; Altindag & Kosedagi, 2015; Hitka *et al.* 2015; Zoghbi-Manrique-de-Lara & Ting-Ding, 2016).

Whilst corporate culture is somewhat ethereal, its significance in operational terms is quite visible. An organisation which focuses on services and, as highlighted before, with particular emphasis in quality, willing for outstanding performance towards customers, has to be able to convey consistency in its behaviour and the corporate culture is the key and can be used as a tool to achieve this. On the other hand, companies with weak or negative corporate culture can jeopardize its existence, since the lack of it has a direct impact on actors' interaction that may result on powerless network interaction dynamics.

Management has to consider this concept as an advantage to reinforce the associates' bonds with the companies' values. It generates great capacity of prescience, by anticipating problems and takes timely preventive actions according to the organisations principles. This assures that company' standards are respected, enhancing the capacity of survival and adjustment to the environment (Zoghbi-Manrique-de-Lara & Ting-Ding, 2016). This also generates the fortitude of each associate that builds up into a resilient organisation enabling companies' strong positions within the network. Clearly, the corporate culture empowers organisations, acting as a driver for decisions and contributing for the performance. Managers should manage this strategically in order to facilitate relationships development, associates involvement and actors' alignment through the network (Hitka *et al.* 2015).

By nurturing a positive culture, management is the role model that associates may confidently follow and as a result, flexible and innovative performance will rise, as well as a sense of being a part of a unit (Karyotakis & Moustakis, 2016). Effectively, as the

SSCs have flexible boundaries, the corporate culture helps communication to be flow and extensive, as a common understanding for all associates, creating unique quality bonds between all structures. Indeed, the stronger the corporate culture, the harder will be to replicate by other competitors and on the other hand, it can be perceived from the outside from prospective employees. This inimitable reputation is a cornerstone for management, administratively and costly speaking, as corporate culture helps top management to retain human resources that share the common spirit of the company. Therefore, it increases teamwork levels, decreases costs of hiring new staff for example, and helps to create a highly qualified associates' portfolio that are translated into available, trustful and innovative resources, that are ready to be used (Altindag & Kosedagi, 2015; Guiso *et al.*, 2015).

Once corporate culture exists and is recognised and supported by all, becomes not only a competitive advantage, but also a "prerequisite for success" (Sadri & Lees, 2001, p.858). Thus, managers needs to ensure that corporate culture is shaped according to the companies' capacity

Besides all these important aspects for management of SSCs, a value proposition is the key to the success. By value proposition, management commits to create a combination of various factors that include the three-dimensional approach - quality, costs and delivery (QCD), which means tangible and intangible factors. QCD was originally developed for manufacturing companies, but is has been used by several types of companies. With strategic QCD, management are able to measure processes and be provided with accurate information from the SSC and act according to the needs. To create a strong value proposition, it is important to go further into the QCD concept and build up service offers directed to each customer. Thid is according to each individual customer profiles and preferences, providing a customised value proposition that is, undeniably, a key factor for the SSC operational success.

2.2. Business Relationships in Shared Services Centres: Actors-Resources-Activities Model

Considering that one of the research questions in this dissertation is how the Yazaki Porto Technical Centre Shared Services Centre interacts with other actors in the business network, in a B2B framework, it has been deemed as fitting the ARA model developed by Hakansson & Johanson (1992).

The Industrial Marketing and Purchasing Group (IMP Group) plays a key role to develop the literature in this section, due to the richness of the studies presented in the area. The IMP Group literature enables the analysis of the phenomenon of business relationships dynamic, how service providers, suppliers and customers interact with each other and independently as well. In this case, the union between all of these actors is what adds the value to business and how this works in SSCs is what in this section will be analysed.

2.2.1. Business Relationships Approach

Businesses are not isolated units and, as seen before, the SCCs, as a business unit, are not isolated and have no clear boundaries and the existence of relationships proves this statement (Hakansson & Snehota, 1995). And what is a business relationship? According to the same authors Hakansson & Snehota (1995, p.26), a relationship is the result of the interaction process “where connections have been developed between two parties that produce a mutual orientation and commitment.”. As a result, interaction and cooperation among the several counterparts are crucial for the service offering (Gottfridsson, 2011).

The relationship developed between companies almost creates a “quasi-organisation” (Hakansson & Ford, 2002), becoming one of the most treasured resource. This enables technological dependence and enhances the opportunity to deliver a customised service, according to each customer specification. Non-formal, but yet strategic aspects are also taken into consideration when developing business relationships, due to the fact that they contribute directly to the business interaction strengthening and therefore

empowering services cooperation. Managing these internal and external relationships is extremely important to the value co-creation from all the counterparts involved (Ritter *et al.*, 2004; Stenroos & Jaakkola, 2010). In those internal relationships, the resources and the activities developed are within the organization and they are not easy to control and influence. The opposite happens in the external relationships, where resources and activities are an “integral part of the organization itself”, (Hakansson & Snehota, 2006, p.263), are influenced and controlled and are subject to its influence and control. Through business interaction, all actors trade-off “...costs and benefits for themselves and for others in both the short and long term” (Ford & Hakansson, 2013, p.1019). Therefore, the success of business relationships contributes to the return on investment that may be obtained through “...improved production technology, customer know-how, distribution capability, or gaining market access.” (Möller & Halinen, 1999, p.418).

Business relationships are important not only in SSCs, but in all organizations that want to improve their value proposal by enhancing business interaction. Thus, the interactive ARA model contributes for the understanding of how different elements are related (Holmlund & Törnroos, 1997; Raskovic, 2015) and how a business relationship is related to a bigger business network (Hakansson, 2009).

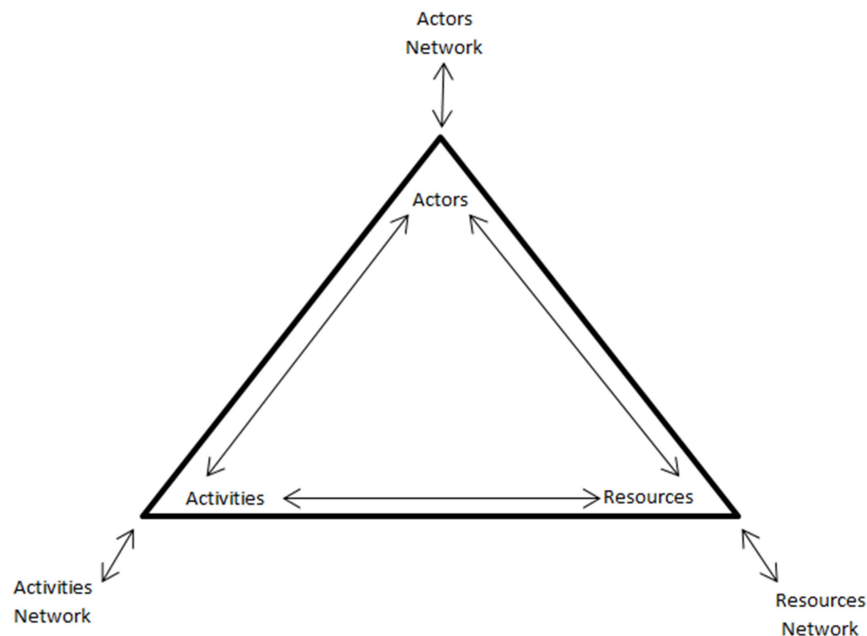
2.2.2. The Actors Resources Activities Model Analysis

The ARA model studies business relationships by separating them into three main tiers: actors, resources and activities. This model describes how these three layers interact with each other and enables the connection between the interacting members. Moreover, this structure is embedded in the network of the company as whole and how each relationship can influence and be influenced (Baraldi *et al.*, 2014), in a fully adjustable and looped sequence.

According to Ford *et al.* (2010) and Hakansson & Snehota (1995), connections have been developed between two parties that produce a mutual orientation and commitment and the outcome of this interaction process is described by the three layers: actors

bonds, activity links and resource ties between the counterparts. Figure 2.2. presents how this model is designed.

Figure 2.2. The ARA Model



Source: Hakansson & Johanson (1992)

Actors

Actors can be one individual, a group of individuals, company parts or companies that develop a relationship between other individuals. They can even be a supplier, provider, customer and/or a partner simultaneously. This layer is connected to which activities actors decide to do and which resources will be used (Hakansson & Johanson, 1992; Gottfridsson, 2011).

In this interaction process, business relations are created and can be pivotal to empower the actors to exchange resources to execute activities, as well as enhancing trust and commitment between actors. Nevertheless, a paradigm arises in this layer, because the actor position in the network can be "...both a prison and a tool." (Hakansson & Snehota, 1995, p.42). Meaning that actors bonds with other actors, according to a relational point of view, they can influence a business network and can be used as a tool to enhance business services, or can be seen as a restriction to those same services.

However, actors need to be aware of their position in the network, as it influences other actors' perception, goals and behaviours in order to achieve a strategic market advantage. As the relationships between actors develop, they become connected, this means that actors become bonded to each other and have the knowledge of what can be requested and exchanged with each party.

Unique bonds are developed between actors according to the perception of each one of them (Hakansson & Snehota, 1995), and they can be more or less strong, affecting the resources exchange and business relationships as well as being also transactional or relational (Raskovic, 2015). They are very important for the knowledge of counterparts' opportunities and solutions (Ford *et al.*, 2010) and they formed "an organised structure of actors" (Hakansson & Snehota, 1995, p.33). Given this, it is vital for companies to have a set of other actors in order to develop a strategic network (Möller & Halinen, 1999).

Activities

Activities are the actions/tasks/services that actors can develop in a more or less extensive integration and coordination. There are several types of activities in a company (logistics, managerial, commercial and others...) that can be linked to other activities in other companies.

In a similar way, this happens in Shared Services Centres. Here, the strength of the activity links has a "...substantial economic effect" (Ford *et al.*, 2010, p.11) on the actors' layer. To maximise this economic effect, it is required to integrate activities in the most efficient manner, to produce a bigger impact to the network, therefore activity links are a factor that can have effects in the productivity of the company (Hakansson & Snehota, 1995).

Resources

Resources are seen as the final layer and they are used by the actors to execute activities. As the relationships grow, resources become available and under control of the actors.

According to Raskovic (2015), resources must be valuable, rare, unique and irreplaceable. These resources can be tangible (equipment, materials for example) and intangible (know-how, skills for instance) (Lenney & Easton, 2009; Ford *et al.*, 2010; Gottfridsson, 2011) and the integration of these resources between the actors is extremely valuable for companies.

“A relationship can tie together resources.” (Hakansson & Snehota, 1995, p.26), which means that strong ties will strengthen activity links and these same resources ties connect the various elements and enhance the network empowerment and actors interrelationship through the resources dependence (Möller & Halinen, 1999).

Interaction in the ARA Model

Referring Ford *et al.* (2010), activity links can enable or disable resources adjustment. Resources ties can increase or decrease activity coordination and actor bonds may enhance the “...possibility of developing activity links and resource ties.” (Ford *et al.* 2010, p.14). The stronger each layer is, the stronger will be the relation promoted by the mutual interaction. Moreover, as the relationships develops, the more customised the answer will be provided from and to the actors (Ferreira *et al.*, 2016).

According to the perspective of Ford & Hakansson (2013), each relationship is unique, because each interaction is adaptable in its resources, activities and actors, leading to the development of “...heterogeneous interdependencies with business relationships (Ford & Hakansson, 2013, p. 1020). The authors also defend that exists competition within business interactions, and the network structure can be jeopardise if actors force the natural competition that may arise.

As Hakansson & Snehota (1995) refer, in this interaction, resources that are shared by the actors, are consumed by the activities and these same activities evolve as much as actors evolve, therefore the resources are as limited as the actors are. In SSC organisations, the services are the activities that are shared between all the actors in the network and the resources are the workforce and the leading technology used to provide services to the parties involved. The network can also be a valuable tool to increase learning about the different actors. Given this, bonds arise and this is the first step to strengthen the activity links and resource ties, which are all related and adjusted.

However, besides the positive aspects that businesses relationships facilitate, they can also be a source of constraint. This means that in a network, there are shared interests as well as shared conflicts and the actors' role in this subject is extremely important because it may, or may not allow cooperative behaviours. Thus, business relationships are not free, since all the relationships are investment, whether is time investment, wealth investment or any other investment (Möller & Halinen, 1999).

These three layers characterize relationships between companies (Hakansson & Snehota, 1995), as they can integrate many and different elements to achieve outcomes in SSC organisations. The system where these tiers are developed is when business relationships and dynamics are born. The three dependent layers of the ARA Model are a part of network structures that are functionally related in many ways. The commitment is very important, as it contributes directly to the value proposition perception of that business relationship (Lenney & Easton, 2009), once again, the purpose of win-win businesses. Hence, for SSCs the value-creation is also enhanced with these interactions, by identifying what contents and goals to share and exchange (Stenroos & Jaakkola, 2010). Actors need each other to fulfill customers' requirements.

Briefly, this model shows the dynamic that exists between business relationships and how they contribute directly to the evolution of Shared Services Centres. Achieving balance between all the parties involved is one of the main goals, however, is important to refer that this balance can be different to each party (Hakansson & Snehota, 1995).

Considering the qualitative and exploratory literature of the present dissertation, in the next chapter, the methodology used is the case study research, allowing the discussion of SSC in engineering operations.

3. Methodology

Given the nature of the present dissertation and its research questions, studying Shared Services Centres dynamics applied to the Yazaki Porto Technical Centre (PTC) SSC, implies an inductive approach. The main purpose of this research is to present and discuss the Porto Technical Shared Service Centre business model as an illustrative case study in engineering operations within a multinational environment. The research answers the following questions:

1. How engineering operations can be developed in Shared Services Centre SSC models?
2. How the business interactions within the network empower the Shared Service Centre model?
3. How value is created within a SSC frame providing self-sustainable growth?

The literature about SSC in the automotive industry or in engineering services is not extensive. However, the studied literature in the previous chapter and the chosen methodology will support the case study research in order to answer these questions by providing empirical evidences.

3.1. Case Study Object Methodology Analysis

Case study research

As referred previously, the three research questions begin with “how”, which lead this study to a qualitative methodology that according to Yin (2003) is the most appropriate to develop a case study. A qualitative methodology must be reliable, authentic and valid in order to allow a deeper knowledge and to reach wider variants in the PTC SSC. Having this in consideration, it was followed a qualitative methodology, based in an exploratory research with an inductive approach. Therefore, the case study analysis allows capturing the developments that occur within the target in study, providing a multidimensional perspective.

Given the importance of Shared Services model for organizations, specifically in the automotive sector that has a huge world expression, for example the global automotive production in 2016 represented over 94,000M€ (OICA, 2017). Only in Portugal, in 2016, the business turnover in automotive components was over 9,000M€ and about 85% of it was for export (AFIA, 2017). In this context, the PTC SSC was chosen to be the case study object as a representation of a successful SSC.

The PTC SSC is a part of Yazaki, a Japanese multinational automotive company, and it was established to answer to the need for a best cost technical centre to support non-core activities of European Research & Development (R&D). The PTC SSC initiates its activity in 2001 as an engineering technical centre that consolidates and handles Wire Harness design data for internal customers within the European group. This service, now named as Electrical Distribution Systems Engineering (EDS-E), is the core business of the PTC SSC. The expansion of the PTC SSC is related to the recognition of opportunities associated to the inputs and outputs in the EDS-E. To fulfil these opportunities, other services are created to provide the necessary inputs and outputs to the core business. Therefore, the Technical Development Activities (TDA) and Operational Support Activities (OSA) service areas have been created and developed, as a part of the PTC SSC, benefiting from the physical proximity and promoting a closer interaction. Thus, maximising inter-process synergies. Considering this dynamic growth and interaction, the PTC SSC becomes a business unit within Yazaki Group. Due to this, the PTC SSC was chosen to be the case study object of this dissertation, considering that it illustrates the substantial nature and essence of Shared Services Centre model. Later through this dissertation, the company will be presented and in a more detailed manner.

This research is focused in a single case study. This methodology is widely used, due to its empirical value in order to study internal and external business relationships (Yin, 2003; Baraldi, 2014; Ferreira *et al.*, 2016), particularly important “...when the boundaries between the phenomenon and context are not clearly evident.” (Yin, 2003, p.13). According to some authors, a single case study can be accepted under certain conditions (Easton, 2010; Baraldi *et al.*, 2014; Ferreira *et al.*, 2016). In this perspective,

a single case study can be more accurately developed with the information that is being researched and can have a vast impact within the network where it is involved, contributing for theory building (Baraldi *et al.*, 2014). According to some authors' referrals, multiple cases studies are accurate to compare by analysing and studying different realities. For this specific research, a single case analysis is considered, as it provides enough dimension and richness about SSC nature and business relationships. This type of research allows exploring in depth the reality of the PTC SSC and its impact within the company's network and what can be learnt from this example, providing empirical evidences and a detailed description of the process (Easton, 2010).

All the data was collected *a priori*, before the case study conclusion, implying an inductive approach and the qualitative information gathering helped to construct the theory for this case that further on, it may lead to deductive studies for future researchers. This type of methodology emphasizes the uniqueness of this case study and indicates how special the nature of the case study can be.

In this context, this case study enables the observance of how the actors interact with each other and how they execute their activities, by providing empirical evidences about shared services centres in engineering services. Hence, reduces the gap of information in this specific area and contributes to the theory building about Shared Services Centres' nature.

In this research there was a continuous presence of the author in the field, which can be considered by "direct observation". According to Marconi & Lakatos (2003), this type observation supports the qualitative nature of the case study, since it allows a descriptive and exploratory analysis. The same authors refer that the systematic registration of behaviours and data collection, enables the observant to have updated information which is very important to this case study since it is not static. The continuous direct observation enables the observant to have a straight reflection of the company environment and has the possibility to directly experience the social actors' interaction. With this technique, the level of information that is accessed is different from the information accessed by an "outsider". One major advantage of this method is

that it is neither invasive nor threatening. The author this dissertation was able to access and record activities and interactions at the exact time as they occur, as faithfully as possible, considering the different variable factors that may influence the business environment. This time consuming technique was done while this dissertation was constructed and it contributes to the enlargement of the business case study.

3.2. Data Collection and Analysis

During the process of data collection, multiples interviews were undertaken as well as careful document analysis provided by the PTC SSC, contributing to the understanding of the impact of the centre within the organisation from the inside of the SSC perspective. Main themes analysed were related to the ARA Model and how the PTC SSC function as a business unit within a network frame.

Interviews

Four non-structured open-ended face-to-face interviews were made to the PTC SSC top management in order to understand the impact of the centre within the organization from the inside of SSC perspective involving a total of 210 minutes. Beside the interviews, some contacts were made in order to clarify questions related to the case study.

The interviewees were the Senior Director and the EDS-E Director of the PTC Shared Services Centre and the given answers were carefully registered to build up knowledge for this case study. The Senior Director was identified as holder of the key role towards the SSC and towards the Yazaki as the parent-company. The EDS-E Director was also acknowledged with a pivotal role on the understanding of the interactions between the actors in the network.

Four main dimensions were identified in order to better understand the guidelines that leaded the interviews as shown in table 3.1.:

Table 3.1. Interviews Guidelines

Interviews	Dimensions	Guidelines	Details
Interview 1	About the PTC SSC	Creation of the PTC SSC Services provided in the PTC SSC	PTC SSC Senior Director 60 minutes Face-to-face interview
Interview 2	Dynamics within the Yazaki Group	Relational aspects towards actors in the network	PTC Senior Director 60 minutes Face-to-face interview
Interview 3	Importance of SLA	Business commitments through the SLA	PTC SSC Senior Director PTC EDS-E Director 40 minutes Face-to-face interviews
Interview 4	The PTC SSC Competitors and Customers	PTC SSC differentiation Strategies' analysis	PTC SSC Senior Director PTC EDS-E Director 60 minutes Face-to-face interviews

Source: Developed by the author

As informed before, the interviews were non-structured in order to enable greater flexibility and dynamics in the questions as well as in the answers. The script created was specifically directed to the two members of the PTC SSC top members, the Senior Director and the EDS-E Director. It was created dimensions that were unfolded into guidelines, based on the dissertation theme and the research questions. The four interviews allowed the analysis of how the shared services business model adopted by the PTC SSC works within the studied engineering centre. They also enabled the analysis of the interactions between the actors within the PTC SSC networks and how the ARA model adjusts to the centre. According to Yin (2003) interviews provide valuable information and that is the reason to have them as a pivotal source of information. Detailed findings collected from the interviews will be further explained in the case study analysis section.

Personal notes were taken and convened after the interviews providing a better understanding of the answers that were given. Not only written answers were recorded, but also non-verbal language was recorded, attitudes, idiosyncratic factors, among others hypothesis, were also observed (Haguette, 1992).

Document Analysis

Several documents were accessed within the PTC SSC, enabling a more accurate analysis of the case study. The documents provided were the PTC Profile; the actions plans that provided a strategic view of the SSC plans; the Balanced Scorecard, the SWOT Analysis and the Service Level Agreements, which were not disclosed due to confidentiality issues, however they are crucial to the PTC SSC.

As previously mentioned in the literature review, the SLAs is one of the best methods to define the elements in the contract between all parties (Van der Linde *et al.* 2006, Walsh *et al.*, 2006, Herbert & Seal, 2012 and Marciniak, 2013), promoting interaction between parties (Scotland Government, 2011). A considerable number of Service Level Agreements were found in the documents provided by the PTC SSC, which currently holds 31 SLAs. By analysing these SLAs, common points were verified and they will be explained in the next section. This analysis facilitates the understanding of how the PTC SSC is committed to their internal customers and these actors constitute a dynamic network.

These documents were collected and analysed within the PTC SSC, with the support of the Senior Director and the EDS-E Director, in order to have a better understanding on the dimensions of the PTC SSC.

For the literature review on the theme of Shared Services Centres, several articles were searched in the different database provided by *Faculdade de Economia do Porto* such as EBSCO, b-on, Web of Science, Scopus, SJR, Emerald and JSTOR. Key words related to “Services”, “Shared Services Centres”, “Outsourcing”, “Business Models”, “Service Quality”, “Management in Services”, “Network”, “Value Creation”, “Interactions”, Business Relationships” and “ARA Model” were the most searched.

Relevant to notice the importance of the Industrial Marketing and Purchasing Group (IMP Group) that plays a key role in developing the literature in this dissertation, due to the richness of the studies presented in the area. The IMP Group literature enables the

analysis of the phenomenon of business relationships, network dynamics and how service providers, suppliers and customers interact with each other and independently as well. These articles provided important information that is the fundamental literature over which this dissertation is supported upon.

All the information collected, not only from the literature reviewed, but also from the interviews, continuous direct observation and the documents accessed internally, are fundamental. They provide the necessary approach to study the PTC SSC unique value proposition, its interactions and strategies used to pursue the SSC goal of business prosperity.

4. Case Study: The Yazaki Porto Technical Centre Presentation

4.1. Automotive Industry

The automotive industry has considerable importance worldwide. In Portugal, this sector has a business volume of 14,3B€, through 32.700 companies with a total direct workforce of 115.400 employees (Auto Informa, 2016). All of this contributes directly and significantly to the country social welfare and with 5% of its Gross Domestic Product (GDP) (AFIA, 2017). In social terms, the customised and associated supply industry have enormous transformational added value to societies in which they integrate.

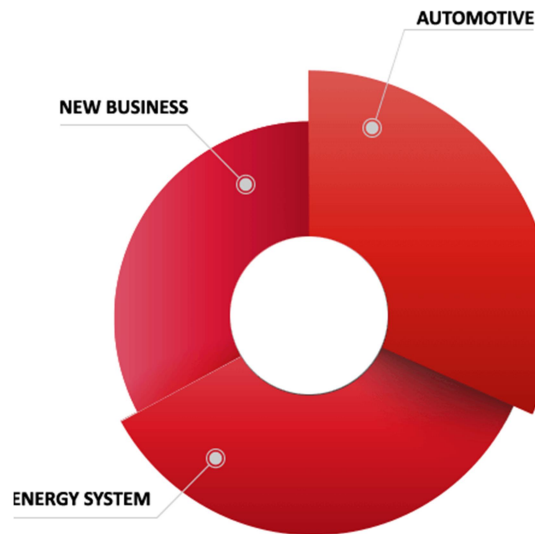
According to ACEA (2017), the European Union manufactured 19,2 million motor vehicles in 2016. Portugal is placed in the 11th position, producing 5.03 vehicles per worker. Globally, only in 2015, 91,5 million motor vehicles were produced. The biggest competitors in the automotive world production are Europe (with 22% in 2016) and China (with 24.4% in 2016).

Being such a great and complex type of industry, any movement in the market has a ripple effect in the economy and other related industries. Therefore, this industry is a vital backbone, contributing directly for an extensive business services creation and value generation.

4.2. Yazaki Corporation Presentation

Yazaki Corporation was founded in 1929 and established in 1941. This multinational Japanese, privately owned company, has a diverse range of business showed in figure 4.1.:

Figure 4.1. The Yazaki Range of Business



Source: Yazaki Europe website (2017)

- Automotive: Electrical Distribution Systems; Components; Electronics & Instrumentation; High Voltage;
- Life Environment Equipment/Energy Systems: Gas Equipment; Electrical Wires and Cables; Air-Conditioning/Solar Products; Transporting Systems;
- New Business: Agro-Business; Recycling; Nursing Care.

Worldwide, the company is present in 45 countries in the five continents, with 487 locations and 173 affiliate companies. Yazaki employs currently over 289,300 people and it is the world's largest producer of wiring harnesses for the automotive sector. Being Japanese, the company prides itself to be built on a strong tradition, deeply rooted and a dependable business partner.

Customer satisfaction is the main priority for the Yazaki Group and the geographical proximity enables a flexible and quick response to the customers' requirements. Yazaki values, principles and practices are shared among all the locations in order to assure the leadership in the sector, a common corporate culture and also exceed customers' expectations on quality, cost, delivery and environmental matters.

To manage the Yazaki Group, three main headquarters have been established:

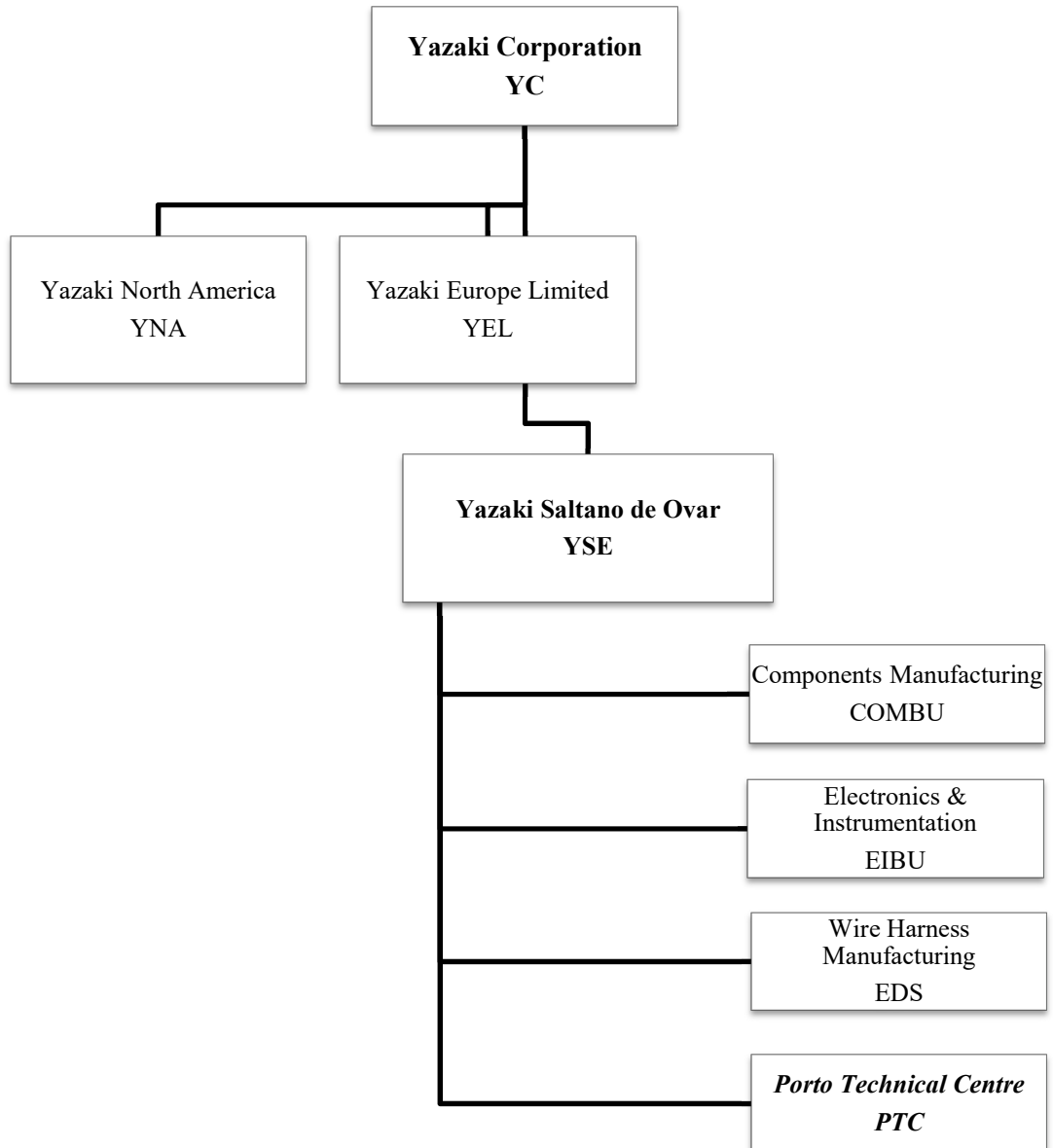
- Yazaki North America Inc. (YNA), North American Headquarters, associated to the Yazaki locations and affiliates in the North and Central Americas;
- The European Headquarters (YEL), located in Cologne – Germany, is related to all European, Turkish and North African locations and affiliates;
- The World Headquarters in Japan, Yazaki Corporation (YC) that manages all the affiliates in Asia, South America and Oceania, as well as the other Headquarters.

Yazaki Europe Limited (YEL) was established in 1980, the first European sales office was in the UK, whilst the first European production plant was in Portugal in 1986.

4.3. Yazaki Saltano de Ovar – The Porto Technical Centre Presentation

Yazaki in Portugal was born from the Salvador Caetano Group in Oliveira do Douro, Vila Nova de Gaia and later the plant was established in Serzedo as Yazaki Saltano de Portugal (YSP). In 1986 a new plant was built in Ovar to aggregate new manufacturing businesses. In 2010, the YSP plant was closed and all the production and services were moved to the plant and new offices in Ovar and it was named Yazaki Saltano de Ovar *Produtos Eléctricos, Lda.* (YSE). Presently, YSE headcount is circa 2000 associates (as of 30th of June 2017 according to Yazaki Human Resources data). In figure 4.2., it is possible to observe where YSE is located within the Yazaki Group and what the major areas of business are.

Figure 4.2. Yazaki Chart 1



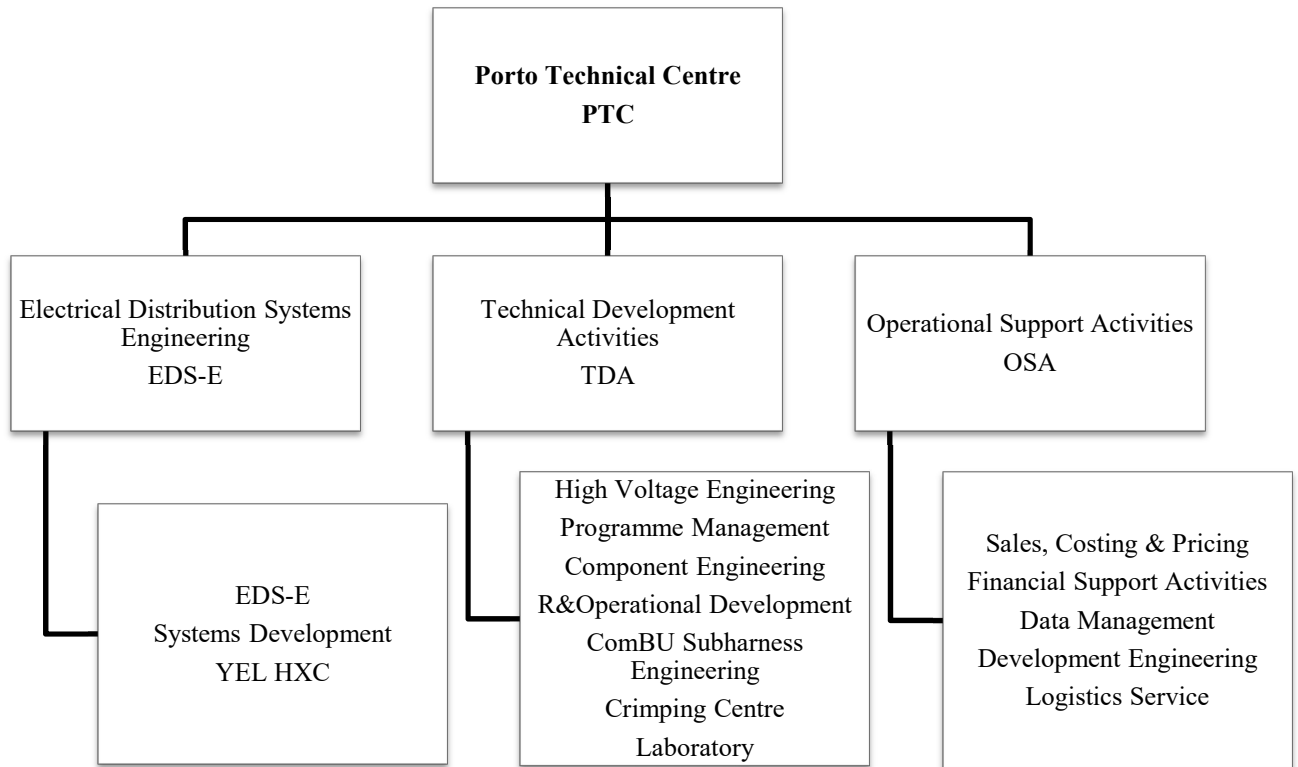
Source: Yazaki Porto Technical Centre documents (2017)

Apart from the plant, a new building was made to accommodate the Porto Technical Centre (PTC) that was established in 2001, currently with over 500 skilled and experienced employees. The main purpose for this centre was to create best cost technical support centre for Yazaki Europe and worldwide. This Shared Services Centre focuses in:

- R&D Engineering;
- Sales, Costing & Pricing;
- Laboratory Services;
- Yazaki Tooling & Equipment.

The decision to create this SSC was due to a need of centralizing R&D activities in order to reduce costs, whilst benefitting from the established activities in Manufacturing Design of Wire Harness and also the Laboratory, which already existed and were consolidated. The service of Wire Harness Design, named as Electrical Distribution Systems Engineering (EDS-E), is the main service provided to the PTC SCC customers. This main area, caused the expansion of the PTC business due to the recognition of the inputs and outputs that were missing within the PTC SSC service delivery. Therefore, the Centre identified the existent gaps in the business and creates other services that provide the necessary inputs and outputs mainly to complement EDS-E service range. The Technical Development Activities (TDA) and Operational Support Activities (OSA) departments are created and they are located in the same building as the PTC SSC. The activities that the EDS-E, TDA and OSA develop, creates a dynamic and complete service package. In figure 4.3. the structure of the Yazaki PTC SSC is presented:

Figure 4.3. Yazaki Chart 2



Source: Yazaki Porto Technical Centre documents (2017)

All of the departments represented above, constitute the range of business solutions that are offered to the PTC SSC internal customers, considering engineering services offering with associated upstream and downstream processes, presented in table 4.1.:

Table 4.1. The PTC SSC Engineering Services Offering

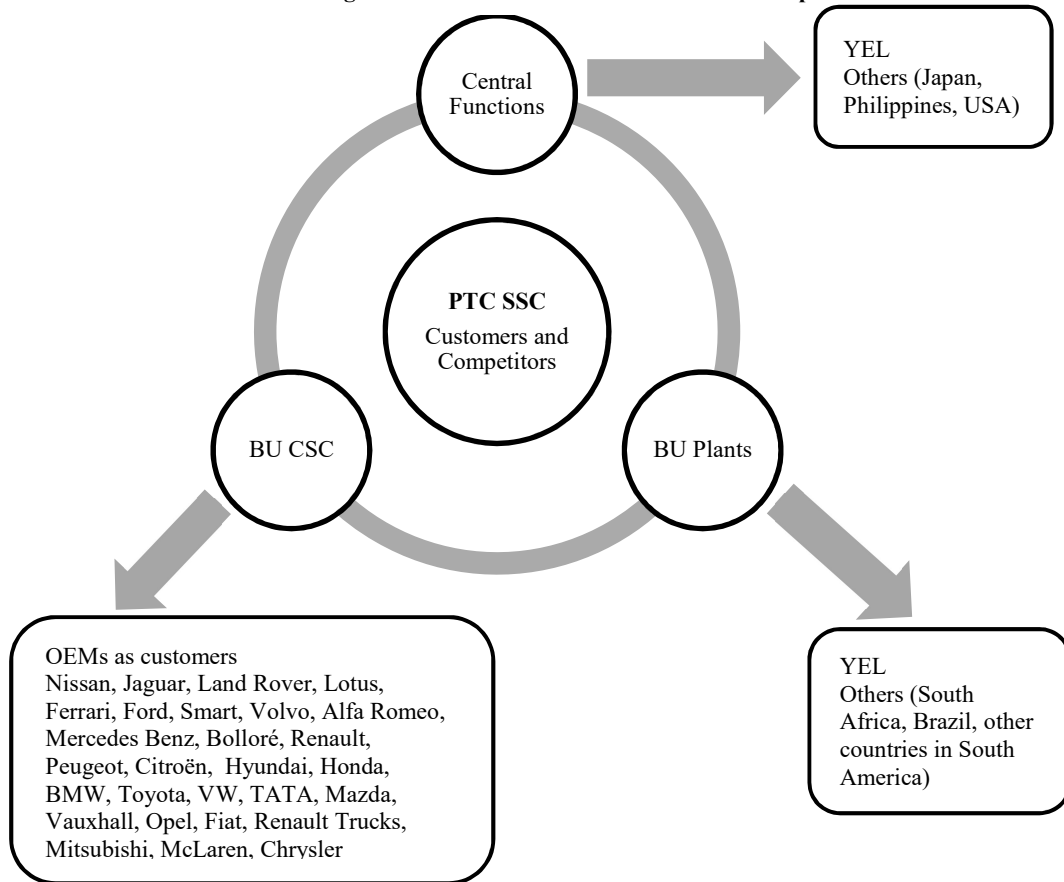
EDS E	TDA	OSA
Harness design solutions	Automotive sliding doors electrification solutions	Finance and controlling services
3D Design installation & workability simulation	Hybrid & electrical vehicles battery packages	Logistics, delivery, order management and invoicing
Complexity studies & management	Sensors – high & low voltage solutions	Master database management
Systems availability & solutions	Automotive E. D. systems routing components	Supplier & technical documents management
Applications development	Development of High Voltage solutions	Environmental data
	Project leadership	Support to plants engineering departments
	Crimping tools design & production	Benchmarking
	Crimping validation and standard evaluation	Investment calculation industrial scenarios
	Electrical, mechanical, chemical, dimensional, calibration and environmental laboratory	Business development
		Marketing & media

Source: Yazaki Porto Technical Centre documents (2017)

Due to the complexity of the automotive business in Yazaki and all the existing activities associated to the core business, the PTC SSC created a range of service offerings that are needed to deliver a better service to the final customer. In spite of this, the PTC SSC is capable to further tailor services and personalize each customer requirement. “Globally there, wherever you are” is one of the company *motos*, meaning that wherever the customer is, Yazaki’s support is continuous.

The main customers of the PTC SSC are the Yazaki Customer Service Centres (CSC) as well as the Yazaki manufacturing plants (BU Plants), thus internal customers. Those CSCs are geographically located as close as possible to Original Equipment Manufacturers (OEMs) automobile plants and if possible, close to Yazaki manufacturing plants. This enhances communication between CSC, OEMs and the PTC SSC, that acts mostly as a CSC provider, presented in figure 4.4.:

Figure 4.4. The PTC SSC Customers and Competitors



Source: Developed by the author

From the figure above, and as mentioned above, it may be concluded that the PTC SSC competitors are mainly internal:

- Business Unit CSC (that are also the main customer), due to the perception of in-house control loss and due to possible effect in labour relations (such as, possible downsizing);
- Business Unit Plants, that hope to receive more in-house processes in order to enable greater autonomy;
- Other competitors in the Yazaki Group that perform in the same areas as the PTC SSC. Those competitors are PET in Philippines, YSS in Mexico, YELZ and YCTT in Europe;
- SSCs developments in competing countries.

Given this, two constraints may be identified: the geographical/physical distance from the industrial core in Europe – the PTC SSC is peripheral; and the external (but yet within the Yazaki Group) resistance to business consolidation, due to the fact that PTC SSC competitors are internal and do not want to lose business volume. In this dual role of the players, being both customers and competitors, lie many of the management challenges to balance the operation in a sustainable manner, therefore creating strong business dynamics.

The PTC SSC connections with the parent-company are identified in fiscal terms, through the sharing of common internal services such as Human Resources, Information Technologies, Accounting, Purchasing and others areas (in order to reduce costs). Another link to the YSE is the macro strategic alignment.

Due to all these characteristics, and given the literature review on Shared Services Centre as well as the research questions, the case study will be analysed and discussed in more detail further down the line.

5. Case Study Analysis: Findings and Discussion

Remembering the proposed research questions for this case study:

1. How engineering operations can be developed in Shared Services Centre models?
2. Considering the ARA Model, how the business interactions within the network empower the SSC model?
3. How value is created within a SSC frame that provides self-sustainable growth?

In this section these questions will be answered and analysed critically, according to the literature reviewed in the second chapter.

This case study analysis is deeply influenced by the IMP Group research, due to the constant developments in the business relationships and network fields. It may be concluded that interactions are embedded in a greater network and if managed with effectiveness, it is a recipe for business success.

5.1. How engineering operations can be developed in Shared Services Centre models?

As mentioned before, the PTC SSC offers a different range of engineering services (see table 4.1., page 50), that forms an almost indivisible and aggregated business solution for their internal customers, providing the best offer possible. Thus, all strategic approaches have to be in line with customers, through the understanding of their own expectations and strategies, so that services can be constantly tailored to meet varying and evolving needs (Schulz *et al.* 2009).

As in any other area of SSC models, it was found that the PTC SSC acts as a nearly independent unit, by organising services offering according to their main goals and by having strategies to compete in the open market, as supported by Bergeron (2002), Van der Linde *et al.* (2006) and Ramphal (2011). This means that being a SSC does not always imply that there is a blind protection from the parent-company, SSCs have to compete internally for new business and the PTC SSC is no exception.

5.1.1. The PTC SSC in the Yazaki Network

As a partner that serves multi-customers, the PTC SSC is not concentrated only in cost savings, but by analysing the internal market, the PTC SSC is able to focus on its core competencies and take advantage of the SSC model benefits.

Quoting the Senior Director:

“The PTC SSC cares about each customer. Business is not static and it is always evolving. Since our customers and competitors are internal, we take advantage by providing tailored services. The capacity of services adjustment is a strong advantage for us, because customers need specific business solutions and the PTC SSC by providing specialised solutions, ensures sustainability. The cost reduction and service excellence that the PTC SSC offers to the network, justifies the continuous investment and expansion of the Centre”.

This means that the re-organisation of resources within the PTC SSC enables the competition by matching the resources availability to customers' needs (Ferreira *et al.* 2016) and by reducing services redundancies. Therefore, the variety of services that this Centre presents is capable of generating value, cost savings and high performance services, which is crucial for customers. As these customers are internal, the PTC SSC works closely with the entire organisation, contributing not only for its own survival, but also for the whole of value chain within the multinational company.

Several aspects are taken into account in this engineering centre as a part of this internal competition. To have a better understanding on this and as mentioned in the literature review, Schulman *et al.* (1999) identified six main elements that must be present in a SSC to achieve business success:

- Service Level Agreements;
- Service Centre (call centre/help desk);
- Skilled and Experienced Employees;
- Good Communication Channels;
- Range of services that add value to the business units.

These elements were also identified in PTC SSC in the system of connections to their customers. The expression of these elements is significant for this engineering centre

success to prove itself as a suitable model for SSC business solutions. The identification of these six elements in the PTC SSC is below presented.

Service Level Agreements

The Service Level Agreements in the PTC SSC are a support system to the activities developed. Currently the PTC SSC holds 31 SLAs that were reached with their internal customers. Through these agreements, a commitment between parties is established deciding the terms of the business regarding the type of activities and resources that will be shared.

As observed, these compliances promote interaction between the actors involved, avoiding unrealistic expectations that may arise in the course of business. Important to refer as well, that in spite of services delivery being regulated, the PTC SSC has the capacity to be adjustable over time according to the need of customers, therefore SLAs are not static agreements. Quoting the EDS-E Director:

“Service Level Agreements represent a commitment between parties within the network. PTC doesn’t mean only Porto Technical Centre, it also means my Passion today, your Trust tomorrow, our Commitment always. This works for SLAs. Through the establishment of SLAs, every formal aspect of the business is considered in order to avoid unrealistic expectations. However, the PTC SSC is flexible enough to consider amendments to the SLAs. This is important to be adjusted to our customers’ requirements.”.

SLAs are also seen by the top management as a method of business funding and also as a technique to create and secure relationships. As supported by Marciniak (2013) and previously mentioned in the literature review, as more elements are included in SLA and foresee as much situations as possible, the lower are the chances of having conflicts in the future. Hence, this also contributes for business prosperity. Citing the Senior Director:

“SLAs are a part of business funding of course, due to its nature. With SLAs not only the PTC SSC is protected but also our customer. Also, through SLAs defines payment methods which is of course crucial for business prosperity.”

By comparing all 31 agreements, it is concluded that there only two aspects that are different between the SLAs, table 5.1.:

Table 5.1. The PTC SSC Service Level Agreements Analysis

Contents	Common to all PTC SSC SLAs	Non-common to all PTC SSC SLAs
Identification of parties	X	
SLA definition and interpretation	X	
Commencement date		X
Obligation of the parties	X	
Engineering Services		X
Procedure for request engineering services	X	
Consideration for payments and methods of calculation	X	
Warranty	X	
Term of agreement	X	
Termination	X	
Confidentiality	X	
Assignment, remedies and force majeure	X	
Amendment and waiver	X	
Miscellaneous provisions	X	
Entire agreement and governing law (in accordance with the laws of Portugal)	X	

Source: Developed by the author

These written agreements are signed and recognise by each party. By the table above, it was possible to analyse that only two aspects differ in the 31 SLA. The commencement date that is defined accordingly to each agreement, and the engineering services that specifies the type of service that is provided accordingly to each customer, therefore, contributing to the tailored service that the PTC SSC proud to offer. This analysis is crucial due the importance that it represents for the centre, not only due to the protection that enables, but also is another step to explore engineering services in this model. This also implies that for the internal customers, equality and farness in terms and conditions is reached between all actors.

Service Centre

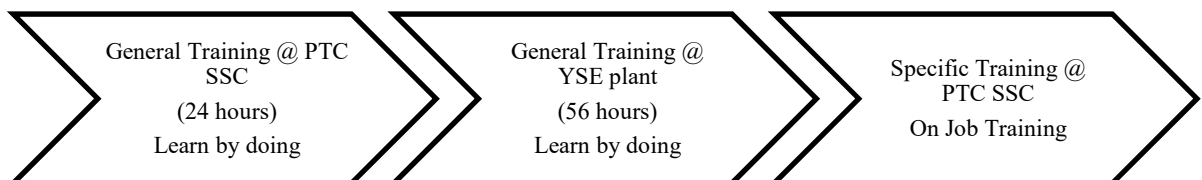
In what concerns the service centre element, this is translated through an on-going support that is provided by the PTC SSC resources (human and technological) that are available to assist customers at any time. This means that the proximity between the PTC SSC and customers is also enhanced through this business interaction. This also creates a propensity for customers to see the PTC SSC as a trustful partner and to build stronger relationships. The PTC SSC Senior Director assumes trust as:

“Our demeanour shall every day lead to the trust by our customers and partners, based on our experience, knowledge and attitude. Our word is as good as any written document.”.

Skilled and Experienced Employees

Human resources, as in any other company, are the greatest asset and the PTC SSC is aware of this, therefore one of the biggest concerns is to have associates that are skilled and experienced. One of the major assignments in the PTC SSC is to give the appropriate training and create involvement between all associates to achieve common goals. An example is the development that the PTC SSC creates for the new associates to be involved with the business, presented in figure 5.1.:

Figure 5.1. The PTC SSC Training Plan for New Associates



Source: Developed by the author

The new associates have, since the beginning, a training plan that includes not only to the PTC SSC but also to the parent-company. This initial training plan is essential to enhance the creation of bonds between all associates' towards the PTC SSC and to strengthen the corporate culture. This means that a ripple effect is created and a union is formed between all associates in the PTC SSC, creating a unified perspective for the customer, which it is not easy to replicate by competitors. Therefore, this aspect was noticed as one of the most important within the PTC SSC frame.

Communication Channels in the PTC SSC

Though the observance, another element that was considered as vital within the PTC SSC was the communication channels. Multiple channels are used in the Centre, not only towards its customers, but also with the parent-company and with all the associates. External and internal communication is pivotal in the business. To have a better understanding about the methods that the PTC SSC uses to disclose information the following systems were identified in table 5.2.:

Table 5.2. The PTC SSC Communication Channels

Communication Channel	Purpose	Distributed for	Result	Frequency
Emails	To disclose formal information	To all associates intended	Effective and rapid channel	When necessary
PTC Newsletter	Present business related news, new technologies and social activities	Entire Yazaki Community	Information share Employer branding	Quarterly issued
PTC SSC Intranet	Private network to share company information, new staff announcements and some trivialities, as for example pictures of hosted events	Only available to the PTC SSC	Very useful for associates as it has direct links to the PTC SSC tool and main webpages that are used daily	When necessary
Others	Banners; Exhibition of specific messages about the PTC SSC social activities, social curiosities and the Centres' value and vision; Associate events; Social media.	Available to the PTC SSC and to the visitors that come to the PTC SSC	To contribute for corporate culture reinforcement and associates' union Relationships enhancement Employer Branding To attract new associates and business partners	Yearly Weekly When necessary

Source: Developed by the author

All of these communication channels are accurate and understandable and shared at all levels. As observed, it may be concluded that these channels serve the purpose of

sharing information, whilst enhances the involvement of all actors, helping to strengthen corporate culture, which is essential to the PTC SSC life.

These channels have been pointed out as developers of corporate culture reinforcement. All the items referred above (see table 5.2., page 58) are pivotal for the strengthening of corporate culture within the PTC SSC. As observed in this Centre, organizational culture is deeply related to the communication and proximity. Quoting the Senior Director:

“Corporate culture is unique. We recognise that an united team relies on a strong corporate culture. Yazaki spirit values foresight, as an ability to anticipate problems and take timely preventive actions; values service mind to help those in need; and values fortitude, the indomitable fighting spirit that has to lead our way in everything we do. As strong as the corporate culture, as difficult it is do replicate by competitors. If we have an unified spirit, the easier will be to achieve common goals.”.

By communication, all the methods referred previously are crucial to maintain a united team towards a common goal. By proximity it is meant integration, as observed, top management is very accessible to all associates. Not only this, but also the capacity of the oldest associates to receive and transmit Yazaki values is also one of the keys of corporate culture turning into a significant advantage. Non-formal strategies also promote the corporate culture as it enhances bonds between all associates (Hitka *et al.* 2015). Definitely, it was noticed that there is a strong corporate culture present within the PTC SSC that is showed through the union that exists in the Centre (Karyotakis & Moustakis, 2016).

Service Range

As mentioned in the previous chapter, the PTC SSC has a service range that was created according to the customers' needs that were identified. In the beginning, the Centre started only with Wire Harnesses engineering purposes, but rapidly grew and other areas were created and aggregated. This new offer variety (see table 4.1., page 50) is the service range that this engineering centre as a SSC offers to their customers. The adjustment of the PTC SSC offer range is one of the main acknowledged advantages of the SSC model, which provides specialised solutions at a high service performance,

business expansion, therefore this is a part of the value proposition for the PTC SSC (Van der Linde *et al.*, 2006).

As Schulman *et al.* (1999) identified, these six elements are crucial to ensure business prosperity. This is also verified in the PTC SSC, these elements are pivotal because they contribute for the adjustment of the engineering services to the customers' requirements and to the strengthening of business relationships, by providing an on-going basis support (Ferreira *et al.* 2013).

5.1.2. Quality in the PTC SSC

In line with what was observed and documented throughout the data collection, quality plays a key role in the PTC SSC. As stated previously in the literature review, quality is expected in everything. For the PTC SSC this is no different, quality is crucial to the success and it is assured that each requirement made from the customer is answered. For instance, to work with the PTC SSC, customers demand some quality certifications. Currently, the Centre proudly holds – table 5.3.:

Table 5.3. The PTC SSC Quality Certifications

Quality Certifications	Description
ISO 9001	Quality management system standard that helps the PTC SSC to ensure the matching of parties' needs and the fulfilment of regulatory requirements.
ISO 14001	Environmental management system standard that helps the PTC SSC to minimize operations that affect negatively the environment.
ISO 17025	Standard for calibration and testing laboratories, representing that the PTC SSC is technically competent to produce test and calibration.
ISO/TS 16949	Technical standard that reinforces continuous improvement in order to prevent defects, variation reduction and waste in the automotive sector.
ISO 10002	Guidelines for complaints handling.
OHSAS 18001	Standard for occupational health and safety management performance.

Source: Yazaki Porto Technical Centre documents (2017)

The above table shows that to accomplish these types of certifications is not only important to ensure quality and security in the service delivery, but also to show that the PTC SSC is a trustful partner, enhancing, once again, business relationships between actors.

As supported by Marciniak (2013), one of the challenges for SSC management is to balance supply and demand in order to attract internal customers. For the PTC SSC the answer to this challenge is through the capability to maintain high performance level and high levels of quality, and these certifications are a part of it. Moreover, customer care is also showed through the development of a tool where the PTC SSC actively answers to customers' claims, supported by the ISO 10002. The quality tools have been created mainly to the production areas, however these same tools have been adjusted over time to offices in order to solve problems that are directly related to services delivery. Presenting the PTC SSC quality systems – table 5.4.:

Table 5.4. The PTC SSC Quality Systems

Systems	Purpose	Interaction	Result	Frequency
Claims Reporting Systems (CRS tool)	Direct submission of claim from customer	Customer and PTC SSC	Constant feedback towards the customer	Five days to the final response
	Share claims with the PTC SSC associates		Transparency at all levels in all processes	
			Enhances customer loyalty	
Audits	Ensure that all areas are working accordingly to what is expected in quality terms	Customers and PTC SSC	Quality assurance at all levels	Regular Audits
Continuous Improvement <i>Kaizen</i> (Japanese word)	The New Yazaki System main target is the optimisation of processes and problem solving	New Yazaki System Group and PTC SSC	Assurance of effective organisation of the services office: visual management, 5S implementation methodology, Six Sigma assurance, elimination of <i>Muda</i> (Japanese word for non-value activity)	Daily commitment
	The Young Guns main target is the optimisation of processes and development of new ideas	Young Guns Group and PTC SSC	Creation of value through the developing of new ideas collected from all associates in the PTC SSC	On-going

Source: Developed by the author

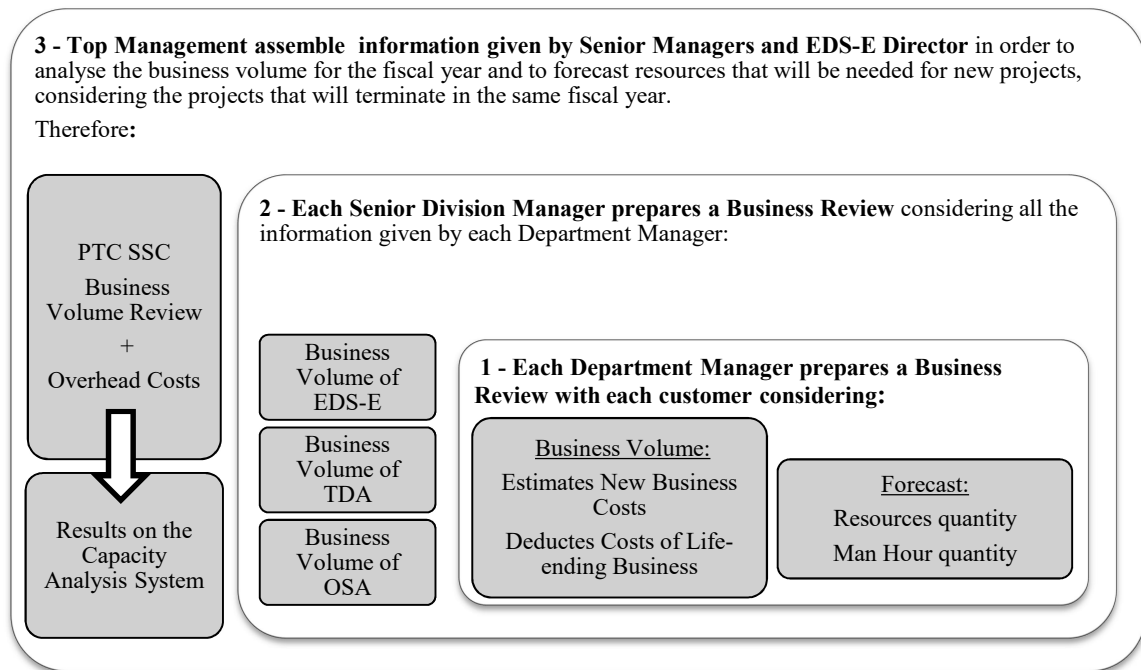
Considering that the PTC SSC belongs to a Japanese multinational company, continuous improvement tools have a significant importance. Besides the Quality department that regulates all the three divisions EDS-E, OSA and TDA, the groups presented in the above table certainly represent an asset to the PTC SSC. This means that they are intimately related to assure quality by all means, as it has a ripple effect throughout the PTC SSC structure. As quality is crucial in every step, the PTC SSC developed multi-teams to ensure high quality levels, as showed in table with New Yazaki System and Young Guns. These two groups are constituted by associates that work in the PTC SSC and analyse improvement solutions that come from different sources that have impact in the daily work of the associates, customers or audits, therefore optimizing services that leads to the value creation

5.1.3. Management Organisation in the PTC SSC

As far as the PTC SSC management is concerned, the Centre is divided into three main divisions as previously referred. The EDS-E division has a Director responsible for the area, OSA has a Senior Manager and TDA that also has a Senior Manager as the responsible for the area. The PTC SSC is headed by the Senior Director, managing all the divisions. These four elements are responsible for the operations within the PTC SSC, constituting the top management. Below them, several service managers, team leaders, technical coordinators and remaining associates exist, whose input is crucial for the top management, in figure 4.3. page 49 and table 4.1. page 50 respectively.

As supported by Bergeron (2002) and as described in the literature review section, SSCs have a budget, an administrative staff and other business-related management areas. The PTC SSC is no different, for instance in budget terms, the Centre organises itself accordingly to a Capacity Analysis System that is done every fiscal year (from July to June) as presented in figure 5.2.:

Figure 5.2. The PTC SSC Capacity Analysis System



Source: Developed by the author

From the above table, it is concluded that the PTC SSC carefully analysis their capaity to act in the network, through the services that are provided to other actors. Therefore the provision that this analysis enables, helps to anticipate not only the budget needs, but also what is necessary in terms of resources. This means that the Centre is constantly adjusting the available resources to the provided activities, hence, meeting customers' needs without causing extra costs coming from misorganisation. These actions enable win-win situations between the Centre and the customers, whilst creates value within theYazaki Group.

Every week, top management has business operations meetings to check the corporate status and discuss all the issues pertaining to the business. With these frequent meetings, top management studies which to steps to take and when, assuring that the evolution of the PTC SSC is in accordance to their capacities and needs.

Others aspect that is also taken into to account by management, is the importance of measurement in the PTC SSC results. Services delivery for instance is measured by all the departments. To have performance metrics is considered a key point, and as referred

by Bondarouk (2014), the metrics must be aligned with the SSC objectives and management actions. The PTC SSC define that those metrics are based on Quality, Cost, Delivery and Environmental key performance indicators. The information gathered from the measurement system of the PTC SSC, is explained below and three main types of internal measurements were considered, table 5.5.:

Table 5.5. The PTC SSC Metric Tools

Tool	Purpose	Interaction	Result	Frequency
Performance & Development Process (PDP)	Individual performance metric, based on targets developed by management	All associates in YEL group/network	Critical for self-assessment Results benchmark Evaluation of general needs and resources' capacity	Yearly
Key Performance Indicators (KPI)	Measurement of specific targets at all levels	Department of the PTC SSC	Access PTC SSC overall performance	Monthly
Man Hour Tracking (MHT)	Tracks how many hours were spent in customers' project	All associates in the PTC SSC/internal	Accurately sell the labour hours and keep track of time measurements per associate and project	Daily

Source: Developed by the author

The above table is related to the importance of metrics in the Centre. The PDP metric is connected to the human resources, while the KPI is related to the department achievements, associated to the activities. The MHT relates activities provided to the actors in the network. These three metrics help the Centre to have a multidimensional perspective when evaluating its resources capability and in order to provide accurate tailored services.

In conclusion, with all the information gathered above from the PTC, it can be stated that this Centre of engineering operations can be developed as a SSC. In contrast to the initial ideas of the areas that could be developed (traditionally Finance, Information Technologies, Human Resources and Purchasing), engineering services are suitable for companies to bet on. This is due to the capacity to be an in house management direction, but working as an independent unit with the primary focus of service

excellence, high performance levels and cost control (Bergeron, 2002; Herbert & Seal, 2012). Once again, to quote the Senior Director:

“Inside knowledge provides inside growth. Engineering service is a strong area in the market and is an opportunity to be developed in models such as SSC models. We are embedded in a network, but it is a Yazaki network, therefore no control is lost and all the expertise is kept. Why pay to outsource when inside the Group we can insource and create more jobs and promote economies of scale? By maximizing resources, processes low costs and incrementing services, SSC model is a long term option for business sustainability.”

The capacity of competitiveness of the PTC, is enhanced by the SSC advantages, with a strong management approach and a solid business frame, therefore, the PTC SSC position within its network is also strong, as it is seen as a reliable partner.

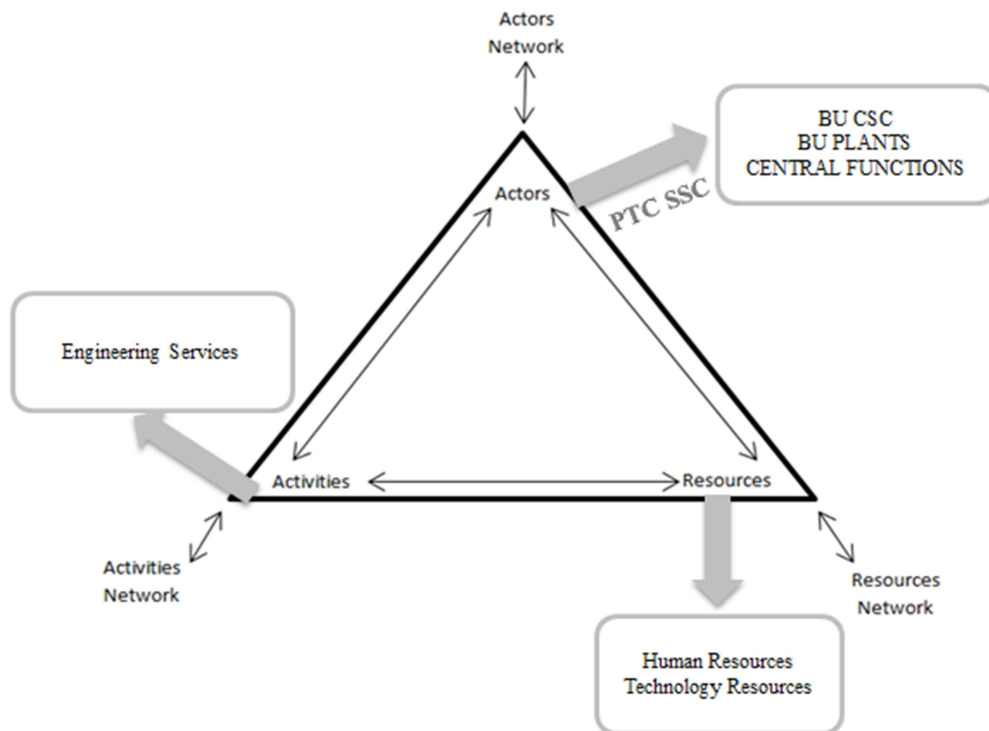
5.2. Considering the ARA model, how the business interactions within the network empower the SSC model?

The purpose of achieving balance between all parties may be different for each actor in the network (Hakansson & Snehota, 1995). Through the interaction between the actors, business relationships are created within the PTC SSC network (Hakansson & Snehota, 1995). These relationships almost create an organisation on their own (Hakansson & Ford, 2002), due to the fact that they contribute directly to the business strengthening and therefore empowering services cooperation.

In the PTC SSC network, the Centre plays the lead role as a main actor, being directly related to the other actors in the same network, its customers: the BU CSC (that plays a double role as it is also a competitor), BU Plants, Central Functions and also the parent company. All the parties jointly decide which activities must be executed and which resources to use, resulting in a mutual commitment (Hakansson & Snehota, 1995). Due to these connections, cooperation is enhanced and bonds between actors arise. Actors have the opportunity to acquire knowledge of each party, enabling proactivity in the requirements fulfilment and strengthening bonds.

As mentioned in the literature review, problems may arise with the proximity between actors and the approach to those difficulties may contribute to create powerful connections, but also can be a way to destroy them. For this, and as mentioned before, the PTC SSC considers that SLAs play an important role in this matter. It is intended to have business elements established to avoid any misunderstanding or unrealistic perspectives and also to protect each actor contemplated in the agreement. Therefore, SLAs act as a dynamic factor to create relationships bonds through the network, as it is the first step of the interaction of the resources and activities that will be exchanged. Actors, activities and resources act in a triad that intensifies interactions, figure 5.3.:

Figure 5.3. The ARA Model Adapted to the PTC SSC



Source: Adapted from Hakansson & Johanson (1992)

Breaking down the image above, the resources identified within the PTC SSC are frequently human and technological resources. These are the resources that are most exchanged between actors within the Centre network, between PTC SSC - BU CSC, between PTC SSC - BU Plants and between PTC SSC – CF. Table 5.6. shows the type of resources that PTC SSC shares with others actors in the network:

Table 5.6. The PTC SSC Resources

Human Resources Support		
Permanent Staff	Non-Permanent Staff	Occasional displaced staff
Located permanently in the actor location	Working in PTC SSC location supporting directly the actors	Going to support the actors according to each request
Technological Resources Support		
Software		Hardware
Shared self-developed software, APIs and bridges, hosting of software as Data Centre		Servers, IT support and interface equipment, prototyping machinery (3D printing,...)

Source: Developed by the author

As depicted in the above table, the human resources are defined by the permanence of the staff at the actors' location, which dictates the type of activities' support that is given directly to other actors. Regarding the technological resources that are used by the actors, these are mainly hardware and software items that are also shared to improve business dynamics. By sharing these resources, ties are created, which brings to the PTC SSC an empowerment in the network and enhances actors' interdependence, therefore reinforcing business relationships through the development of bonds.

In the PTC SSC, activities play a very dynamic and variable role. For example, for the same project, the activities are different and each OEM has different specifications. The activities requested by the customer, who plays the role of actor, with the PTC SSC that also acts as an actor, together they work on a best business solution in order to accomplish the customer order. At this very challenging level, activity links are created and the integration of these activities increases actors bonds. Results from this coordination process in the PTC SSC, are unique activities that are tailor made according to each specification, contributing directly to the network customer retention.

The dynamic created by these connections enhances competitiveness and generates value from all the actors involved in the network (Ritter *et al.*, 2004; Stenroos & Jaakkola, 2010). In short, the PTC SSC interacts through their resources and activities provided to all actors in the network. Those actors have requirements that create the

need for these supplied activities by the resources. Since services are unique, each solution is personalized to meet the need of customer.

During these interactions it is noted that concerns arise regarding the influence that each actor has on the PTC SSC, since the type of services that are provided have pronounced impacts in OEMs, that will have an effect to the entire organisation. Another dual aspect is the concern related to the fact that the internal customers are also internal competitors, mainly PET, YSS, YELZ and YCTT, as previously mentioned in the case study presentation. The result is an urge to be the chosen partner within the network, regarding low cost and high performance. This is translated into the creation of better solutions, enhancing the development of the formal and informal strategies that will be explained further down the line.

However, top management showed that competition was not the focal point of the PTC SSC, as it can jeopardize the whole structure and break important business relationships, but to provide the best service offering to their customers. As mentioned by the EDS-E Director:

“Our competitors are internal and they want expand as much as we do. Hence, we all want to be the best partner for each customer. Since we all are connected into a wider network, the urge to offer the best business solution, must be controlled and coordinated. Try to monopolise the network is a mistake that will affect the entire chain. However, this does not mean that the PTC SSC will not try to be an excellent and reliable partner as much as possible.”.

Taking into consideration the information above, the PTC SSC is a reference within the network. The service range that is offered to the customers is very complete and the strategic geographical positioning of the Centre (serving Europe and North Africa), are attractive to other actors in the network. As observed, the business relationships that the PTC SSC creates within the network have an effect throughout the entire Centre structure. The existence of these interactions proves that, in spite of being an independent unit, it is not an isolated unit. The result of all of these aspects is a strong positioning within the network.

For this second question and from the observance of the dynamic of business interactions within the PTC SSC, the empowerment of the SSC model comes from the capability of the Centre to manage the relationships between actors. By taking advantage of all benefits that these relations brings, building strong and reliable partnerships in cooperative networks. Therefore, win-win strategies are enhanced with business relationships, as actors need other actors.

5.3. How value is created within a SSC frame that provides self-sustainable growth?

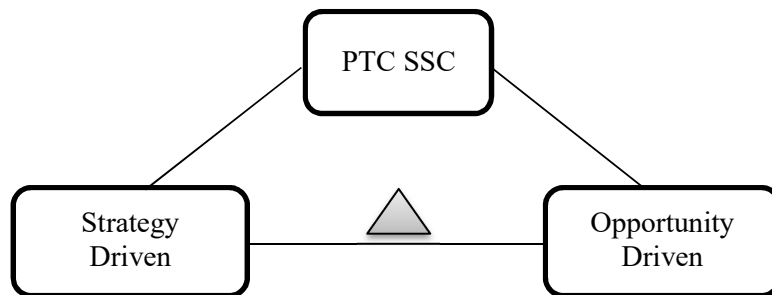
As interpreted by the interviews, regardless of being a SSC that belongs to a parent-company, the PTC SSC is always searching for new strategies both internally and externally to attract businesses and to prove that is a true Centre of Excellence. During the interviews to the Senior Director, “*Excellence*” was the most repeated word. The Porto Technical Shared Services Centre is extremely focused on providing the best service delivery possible in order to achieve excellence in all aspects. As a part of the PTC SSC vision, the Senior Director defends:

“For the PTC SSC, excellence is vital. We strive for the continuous development of our team members, our processes and our solutions with the aim of being better every day. We exist to serve our partners and customers. We foster relationships and excel in committing to their needs and expectations.”

As supported by Marciniak (2013, p.219), being close to customers, acting almost “...as internal consultants”, promoting joint periodic business reviews, assessing performance and alignment, is the key for the adjustment of the business. To build these sort of dynamics makes businesses consolidate and stable. This type of contacts between actors happens very frequently, insuring as well the endurance of business relationships that as seen by the previous research question, are pivotal in this matter, since all interactions are influenced by each other (Baraldi *et al.* 2014).

Within the PTC SSC frame, it is possible to conclude that two strong drivers are needed for the development of business dynamics and interactions, resulting in the value co-creation, presented in figure 5.4.:

Figure 5.4. The PTC SSC Driven Structure



Source: Developed by the author

To explain the previous figure, the driver for the PTC SSC and the relations between each driver is variable and is used according to each need – acting across the network frame. In the strategy driven dimension, the PTC SSC defines strategic plans as a part of the company formal structure to develop a business: business targets, customers, market segments, benchmarking, measurements and others. These strategies are in consonance with what are the mission and the vision of the PTC SSC. The opportunity driven dimension requires soft skills that contribute for growth of relationships bonding (Ford *et al.*, 2010) (meetings, punctual and strategic contacts, benchmarking, brainstorming, events/conferences and others). This is not a formal part of the structure, but rather the PTC SSC technique to capture opportunities and enhance business interactions by creating a sales mind-set, flexibility to deliver and caring about customers, in an on-going basis. For example, the last fiscal year (July 2016 – June 2017) the PTC SSC received 1653 visitors, coming for several purposes such as Yazaki European conferences and global events hosted at the Centre. Weekly visitors are also received to have team meetings, training, or even just to visit the Centre. With these face-to-face interactions, the PTC SSC opportunity drive is enhanced. The importance of this aspect to all associates, especially to management is immeasurable. It is the most effective form of communication, resulting on productive trustful cooperation. Strong communication between actors ensures the same level of understating and balances

expectations and reachable service delivery. Each person is unique, and the building of personal bonds is considered essential for the PTC SSC in order to build effective collaboration. These two drivers enhance personal development that leads to the identification of potential talents and facilitate relationships. Retaining key people and reduce fluctuation are important to this business expansion.

By value proposition, the PTC SSC management commits to create a combination of various factors that include quality, costs and delivery (QCD). With strategic QCD, management is able to measure processes and be provided with accurate information from the SSC and act according to the needs. To generate a strong value proposition, it is important to go further into the QCD concept and build up service offers directed to each customer, according to individual customer profiles and preferences. This will provide a customised value proposition that is, undeniably, a key factor for the SSC operational success. In spite of the paradigm of winning simultaneously with costs decrease and with the high level of services provided, the Centre searches to maximise value generated for the business and relationships. For example, through the document analysis and interviews to the Senior Director, the cost per hour of the PTC SSC has not increased in ten years, however the strategy has been to improve performance. This is the key to enhance customer loyalty and also to attract new business partners. Services are now beyond the concept of added value to product and exist by themselves as an independent business operation. As sustained by the Senior Director:

“Growth on the other hand, comes typically from going the extra mile, from actively promoting solutions applied for other customers, or by creating the need itself for a service that the customer did not know the need for.”.

Services integration is the turnkey process to achieve value creation not only for the PTC SSC, but also for the Yazaki Group. Commitment to delivery, through understanding of both upstream and downstream process needs, is a key daily operational requirement. In line with the PTC SSC vision, the Senior Director defends:

“For the PTC SSC commitment is pivotal. We deliver to meet or exceed expectations in everything we do, no matter what endeavour or need we devote ourselves to. We always

honour our contracts and the needs of our customers in accordance with their respective agreements, even if to our loss.”.

In B2B environments, business relationships are extremely important and it was showed that the connection between actors can create important synergies and contribute directly to the creation of value.

According to all the information gathered and due the characteristics of Shared Services Centres revised in the literature review, self-sustainable growth within a SSC frame is possible. By integrating business solutions, the generation of value in the value chain is achieved. To quote the PTC SSC Senior Director, is very important to “*Teach trust, cultivate relationships and build networks, therefore, create new value*”.

6. Conclusions, Limitations and Further Research

Theoretical contributions are related to the reinforcement of studies in the area of Research & Development, especially in engineering services with a SSC model and how business relationships affect interactions in the network. By presenting the PTC SSC case study, an accurate dimension is provided and therefore can serve as a base for theory building in this area to be further developed. The study can be useful to understand how a SSC frame is a model that can be easily adjusted to business areas as much as planned. Main contributions for the IMP Group relate business relationships to the continuous interaction within the Shared Services Centre network. Another contribution is related to support the works that the researchers from the IMP Group have been developing within business relationships area. It is sustained that the SSC networks are connected, enhancing the creation of dynamic business relations that contribute directly to the positioning of the SSC and how actors are influenced by these relationships.

Empirical research verifies that in consonance with the insourcing nature, the SSC model enables an in house management whilst allows the PTC SSC to work as an independent unit, with high performance levels and cost control (Bergeron, 2002; Herbert & Seal, 2012). As an actor that serves multi internal actors, the Centre does not have a blind protection from the parent-company. Therefore, competes internally for new business, benefiting from the advantages of the SSC model, strong management approach and a complete business range, the Centre's network position becomes solid and reliable.

This empirical work also shows that business relationships empower the PTC SSC through the network interactions, as they are the key for successful business aggregation (Hakansson & Snehota, 1995). This is related to the capacity of the Centre to manage these relationships, by building reliable partnerships and a cooperative network, which results in win-win strategies (Stenroos & Jaakkola, 2010). The dynamic nature of the SSC model aggregated to the dynamic of business relationships, results in positive business solutions and enhances competitiveness that managers need to be focus on. It

is also highlighted that each service provided the actors is specific and it is influenced by the evolution of business relationships, dictating the position within the network (Morris *et al.*, 2015). Emphasizing this relational view, the coordination and proactivity between managers within the Centre create unique values relying on cooperation, reciprocity and interdependence (Hakansson & Snehota, 1995).

To finalize the empirical conclusions of this study, by creating a different and aggregated range of services, the PTC SSC has evolved over time to produce the best business solution for their internal customers. The PTC SSC faces the paradigms of wining simultaneously, with costs decrease and with the high level of services provided. This means that the output expected from the Centre is not just an accurate execution, but also to add greater business benefit across the network through effectiveness and the search to maximise value generated for the business and relationships. In spite of having the same cost per hour in ten years, the PTC SSC considers that the strategy is to improve performance. This contributes not only to the growth of the Centre, but also to enhance actors' loyalty and to attract new business partners. The two drivers analysed in the case study findings, strategy and opportunity driven, are the key drivers to ensure self-sustainability. The drivers help the PTC SSC to develop dynamic interactions in the network, resulting in the value co-creation. To conclude, delivering operational excellence, through flexible models and permanent adjustment to the market (Rothwell *et al.* 2011), will lead to the business prosperity and development.

In managerial terms, the identification of the SSC position in the network by managers is vital, as well as the development strategic management decisions whilst considering relationships between all actors and the key driven dimensions. Therefore, is essential for the SSC managers to consider the perception of the other actors in the network, in order to understand the dynamics that are created and to wisely execute resources integration. Considering that relationships are highly affected by the surrounding framework, benchmarking techniques are important to increase knowledge for the SSC itself and to contribute for the development of stable business relationships. As mentioned in the case study analysis and findings, the challenges for management implies the balance between the paradigms above stated. To maintain high customer

service level with great level of quality, the PTC SSC achieves this through the assurance of quality through quality taskforces, certification accomplishment, capacity analysis system and continuous measurement.

Regarding the limitations of this case study, the research presented is based upon a single case study, where no other business contexts being observed for the purpose. Since the network dynamic observance was limited, mostly the perspective of the targeted SSC was the one considered. Another limitation to consider is the fact that this study contemplates only one firm in the private sector. As informed in the methodology section, there was a direct observation from the author of this dissertation, however, in spite of the advantages that this method brings, it also represented a limitation due to the fact that it is time consuming and the neutral capacity of the observant may be jeopardize.

Further research should be considered in this area, since it is proven that the findings are relevant as a business solution for engineering operations. The suitability of this same business solution in other business contexts should also be studied. Also, future research would benefit from developing multiple SSCs analysis and gather empirical information regarding network interactions and perspectives, and as well managerial behaviours and implications. As another suggestion for future research would be the analysis of a SSC from the perspective of the parent-company, which for reasons of convenience was not considered in this case study. It would also be interesting to investigate the associates' driven, loyalty and productivity towards the parent-company, after the supposed loss of knowledge.

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